National Aeronautics and Space Administration

STYLEBOOK and OFFICE of COMMUNICATIONS MANUAL

With appendices providing guidelines for:
- RELEASE OF PUBLIC INFORMATION
- ALL COMMUNICATIONS PRODUCTS
- NASA RELEASES & ADVISORIES
- CONTRACT AWARD RELEASES
- WEB ARTICLES
- IMAGE CAPTIONS
- NASA TV VIDEO FILES
- BEST PRACTICES
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8th Edition, Update 1: May 2018

Office of Communications

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STYLEBOOK

Note about AP Style
All materials issued from NASA's communications offices should conform to the Associated Press Stylebook, except for the deviations included in this NASA Stylebook. This guide is intended as a supplement. For items not covered in the AP Stylebook or this guide, consult Webster's New World College Dictionary.

When companies, groups or organizations' preferred name differs from AP Style, such as Sierra Nevada Corporation (vs. Sierra Nevada Corp.), typically NASA will defer to the company, group or organization's preference.

NASA also breaks from AP style related to using an acronym when the full name only is spelled out once. If the acronym is more widely known than what it spells out, the acronym should be used once for clarity, such as STEM. See abbreviations and acronyms for more information.

Capitalization
If the term is capitalized in this guide, it should be capitalized. If lowercase in this stylebook, it should be lowercase. Exceptions are noted with the entry.

Punctuation and Symbols
Consult the AP Stylebook's punctuation guide. Use punctuation to clarify the thoughts being expressed. Keep sentences short and concise. Limit series with semicolons. Rephrase if necessary. The following are some of the punctuation rules particularly relevant to NASA news releases.

ampersand
> Per AP, use the ampersand only when it is part of a company's formal name, such as Ball Aerospace & Technologies Corp.

headlines
> Use single quotes in headlines, per AP. Headlines should be in title case. See headlines for more information

serial commas
> Per AP, do not put a comma before the conjunction in a simple series. Put a comma before the concluding conjunction, however, if an integral element of the series requires a conjunction. *The program focuses on technology, research and development, and mission operations.*

Telephone numbers
AP style is with hyphens. *For more information, call the NASA Headquarters newsroom at 202-358-1600.* For international numbers, insert the country code and, if applicable, the city code in parenthesis, such as (44-20) 7353-1515.

Communications Priorities

Aeronautics Research

NASA is With You When You Fly.

Every U.S. aircraft and air traffic control tower uses NASA-developed technology. We're committed to transforming aviation by reducing its environmental impact, maintaining safety, and revolutionizing aircraft shapes and propulsion. #FlyNASA

Earth

NASA Earth: Your Home. Our Mission.

For more than five decades, NASA has used the vantage point of space to understand and explore our home planet, improve lives and safeguard our future. NASA brings together technology, science, and unique global Earth observations to provide societal benefits and strengthen our nation. Advancing knowledge of our home planet contributes directly to America's leadership in space and scientific exploration.

International Space Station

We're Working Off the Earth, For the Earth.

The International Space Station is a blueprint for global cooperation and scientific advancements, a destination for growing a commercial marketplace in low-Earth orbit, and a test bed for demonstrating new technologies. The space station is the springboard to NASA's next great leap in exploration, including future missions to an asteroid and Mars. #ISS

Mars

We are on a journey to Mars. Today our robotic scientific explorers are blazing the trail. Together, humans and robotics will pioneer the next giant leap in exploration. #JourneytoMars

Solar System and Beyond

NASA: We're Out There.

NASA's exploration spans the universe. Observing the sun and its effects on Earth. Delving deep into our solar system. Looking beyond to worlds around other stars. Probing the mysterious structures and origins of our universe. Everywhere imaginable, NASA is out there. #NASABeyond

Technology

Technology Drives Exploration.

We develop, test and fly transformative capabilities and cutting edge exploration technologies. Our technology development provides the onramp for new ideas, maturing them from early stage through flight and giving wings to the innovation economy. #NASAtech

# #

3D
The common abbreviation used for the term three dimensional. Use without a hyphen, per AP. *The first 3D printing in space was done aboard the International Space Station.*

A

abbreviations and acronyms
Avoid overuse. If a term is more widely known by its acronym, such as SOFIA and MESSENGER, spell it out on first reference. Then use the acronym. If a name is used only once or twice in a release, the acronym is not necessary. The abbreviation or acronym should be included once IF it will help the public and media understand issues in news conferences and mission commentary, or if the acronym is more widely used than what it spells out, such as STEM.

Agency centers and facilities never should be referred to with abbreviations, with the exception of JPL. See center names for more. Do not abbreviate International Space Station. See International Space Station for more.

Do not mix use of upper- and lowercase letters in an acronym, unless that is how a mission commonly IS known (e.g., OSIRIS-REx). Per AP, omit periods in acronyms unless the result would spell an unrelated word. But use periods in two-letter abbreviations. Use all caps, but no periods, in longer abbreviations and acronyms when the individual letters are pronounced ABC, CIA, FBI. Use only an initial cap and then lowercase for acronyms of more than six letters, unless otherwise in the AP Stylebook, Webster's New World College Dictionary or certain NASA missions, such as MESSENGER.

aboard vs. onboard
Aboard and onboard mean almost the same thing, but the preferred term is aboard. The term onboard may be used as an adjective to refer to something carried within or occurring aboard a vehicle – e.g., an onboard guidance system. Avoid use of *on board* as a noun.

administrator
Capitalize only when used before a name, per AP. *NASA Administrator James Webb will lead the briefing.*

aeronautics
The study of flight and the science of designing, constructing and operating an aircraft.

aft
At, near or toward the rearmost part of a ship or tail of an aircraft. Prefer *tail* or *rear.*

agency
Never capitalize agency when it stands alone. NASA awarded a contract to The Boeing Co. *The agency released details during a news conference.*

agencywide
No hyphen

airborne
Supported only by aerodynamic forces; aloft or flying.

ATK - Alliant Techsystems
Acquired by Orbital; see Orbital ATK.

altitude
Height expressed in units of distance above a reference plane, usually above mean sea level or above ground.

Ames, Joseph S. Ames Research Center
Standard use is NASA's Ames Research Center. Dateline is Silicon Valley, California.

ampersand
Per AP, use the ampersand when it is part of a company's formal name, such as *Ball Aerospace & Technologies Corp*. The ampersand should not be used in place of *and*.

angstroms
Do not capitalize.

Apollo mission numbers
Use Arabic numerals instead of Roman numerals – e.g., Apollo 11

Applied Physics Laboratory
Located in Laurel, Maryland. It is a not-for-profit center for engineering, research and development and is a division of Johns Hopkins University.

approach
The flight phase during which an aircraft has its landing gear extended and is descending and slowing its speed for landing.

Arabic numerals
Arabic numerals should be used in most cases for clarity, unless Roman numerals are part of a formal name, such as the Saturn V, Delta IV or Atlas V rockets.

arc jet
Lowercase, unless used in proper noun. *The Arc Jet Complex is located at NASA's Ames Research Center in Silicon Valley, California.*

arctic

Lowercase for the adjective meaning frigid; capitalize for the region around the North Pole. Also *Arctic Circle, arctic fox, Arctic Ocean.*

Armstrong, Neil A. Armstrong Flight Research Center
Standard use is NASA's Armstrong Flight Research Center. It was officially renamed March 1, 2014, from Dryden Flight Research Center. The center's Western Aeronautical Test Range also was renamed to the Hugh L. Dryden Aeronautical Test Range. Dateline is Edwards, California. Armstrong is located on Edwards Air Force Base but is not a part of the base. Because Armstrong is located wholly within the boundary of Edwards, access is through property and gates controlled by the Air Force.

artist's conception and artist's concept
Do not use *artist's conception* or *artist's concept.* Use *illustration.*

astronaut
Per AP, this is not a formal title and should not be capitalized before a name. NASA astronauts fly. *NASA astronaut Joe Acaba flies.*

astronaut candidate
Use the full term, in lowercase, to refer to those individuals who have been selected by NASA as candidates for the NASA astronaut corps and are currently undergoing a candidacy training program at NASA's Johnson Space Center. Do not use the abbreviated form of *ascan.*

astronaut names
It is standard to include a pronunciation guide for any astronaut's name that is or could be difficult to pronounce. For example: *Oleg Novitsky (OH-leg NO-vit-skee), Flight Engineer with Roscosmos*

The first time the crew is introduced in a release or online, use their full titles, including military rank and affiliation, and full names. In later media products, simply use the astronaut's preferred name on first reference and last name on second reference in the same document, per AP style. In photo captions, treat each photo as a first reference and use the full name and title.

atmosphere
The gaseous or air portion of the physical environment that encircles a planet. In the case of Earth, it is held in place by Earth's gravitational attraction. The divisions of the atmosphere, from the ground up, include the troposphere, stratosphere, mesosphere, thermosphere (including the ionosphere) and the exosphere. The tropopause is the layer between the troposphere and stratosphere.

attitude
The position of an aircraft or spacecraft as determined by the relationship between its axes and a reference object, such as the horizon. The inclination of the three principal axes of an aircraft relative to the wind, to the ground, etc.

aurora (singular), auroras (plural)

Automated Transfer Vehicle
The European Space Agency developed these autonomous vehicles that can supply the International Space Station with propellant, water, air, payload and experiments, and boost the station into higher orbit. Avoid use of the abbreviation ATV. The first Automated Transfer Vehicle, known as the Jules Verne, docked with the International Space Station on April 3, 2008.

avionics
A general term for the development and production of electrical and electronic equipment for use in aircraft, spacecraft and missiles. Also, a term for that equipment.

B

Baikonur
The Baikonur Cosmodrome is in Kazakhstan.

Ball Aerospace & Technologies Corp.
Its dateline is Boulder, Colorado, where it is headquartered.

big-bang theory
The theory that the universe started out in a super-dense primeval state and has been expanding ever since. Used without the word *theory*, it is *big bang*, lowercase and no hyphen.

Boeing
The Boeing Co. Its dateline is Chicago, where it is headquartered.

bow
The front end of a ship.

British National Space Centre
Avoid abbreviating, but, if necessary, abbreviate to BNSC.

C

Canadian Space Agency
Avoid abbreviating, but, if necessary, abbreviate to CSA.

Cape Canaveral
Cape Canaveral is the Associated Press dateline locator for NASA's Kennedy Space Center in Florida. It also is the site of Cape Canaveral Air Force Station.

capsule communicator

Generally the only person who communicates directly with a space crew. On second reference, *capcom* is acceptable. *Bob Curbeam was the capsule communicator, known as capcom, during John Glenn's second flight to space. As capcom, he communicated directly with the crew.*

centerwide
No hyphen

center names
The centers are part of NASA and require the possessive case. On first reference, always use NASA's before the center name and include location after center name (comma always follows location when the state is included). The exception is NASA Headquarters, which is not possessive. Do not add *the* before a center name (e.g., the Langley Research Center) and, on second reference, do not add *NASA* (e.g., NASA Langley).

Separate the name of the center and its location with the word "in" and not a comma. *NASA's Jet Propulsion Laboratory in Pasadena, California, is located near Los Angeles.* On second reference, use *Johnson, Kennedy, Marshall*, etc., rather than the abbreviation. JPL is an exception. Never capitalize center when it stands alone. *NASA's Johnson Space Center in Houston will hold a news conference. Reporters at the center may ask questions.*

Facilities such as Wallops, Plum Brook and White Sands, which are subsets of various centers, should be introduced as a possessive of NASA, not the center. *NASA's White Sands Space Harbor in Las Cruces, New Mexico, was an optional landing site for the space shuttle.*

Centre National d'Etudes Spatiales
The French space agency. Avoid abbreviation, but, if necessary, abbreviate to CNES.

China National Space Administration
Avoid abbreviation, but, if necessary, abbreviate to CNSA.

cislunar
Space between Earth and the Moon. One word, no hyphen. The term is an adjective, and should be followed by a noun, such as *space* or *exploration*. However, avoid use when possible. Instead, use explanatory verbiage such as deep space frontier around the Moon or thousands of miles beyond the Moon or proving ground of deep space near the Moon.

clean room

climate change
The variation in Earth's global climate over time, either cooling or warming. This term describes changes in the average state of the atmosphere over a long time scale, as opposed to brief changes in weather. It is not synonymous with global warming.

closeout
One word in nearly all cases: closeout crew, closeout photos, etc., except when used as a verb: *When they close out the remaining tasks, we'll be ready to go.*

cockpit
A compartment in the front of the airplane or space shuttle where the flight crew performs its job of flying the craft.

comet
Capitalize only the proper noun element of the name – e.g., Halley's comet.

Commercial Crew and Cargo Program
Oversees NASA's Commercial Orbital Transportation Services Project. Do not refer to it by its abbreviation, C3PO.

Commercial Crew Program
NASA's Commercial Crew Program is an innovative partnership to help the aerospace industry in the United States develop space transportation systems that can safely launch astronauts to the International Space Station and other low-Earth orbit destinations. It can be abbreviated to CCP on second reference.

Commercial Orbital Transportation Services
A NASA project that was intended to foster a robust commercial space industry through government investment of seed money in demonstrations of transportation capabilities to and from the International Space Station and future purchase of services. Abbreviate to COTS on second reference.

Commercial Resupply Services
Commercial Resupply Services (CRS) are contracts NASA has signed with SpaceX and Orbital Sciences Corp. (Orbital ATK) for cargo flight for the International Space Station. For specific flights, NASA uses the designation *SpaceX CRS-5*, for the fifth mission by SpaceX flying under the contract, or *Orbital ATK CRS-2*, for the second mission by Orbital flying under the contract.

company names
For a company's formal name, consult the national stock exchanges New York Stock Exchange, www.nyse.com; Nasdaq, www.nasdaq.com; or the American Stock Exchange, www.amex.com. Do not use a comma before Inc. or Ltd., even if it is included in the formal name. The formal name need not be used on first reference, but it should be contained, with the location, in the body of the text.

Generally, follow the spelling and capitalization preferred by the company eBay. But capitalize the first letter if it begins a sentence. Do not use all capital letter names unless

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the letters are individually pronounced BMW. Others should be uppercase and lowercase. Ikea not IKEA; USA Today, not USA TODAY.

Do not use symbols such as exclamation points, plus signs or asterisks that form contrived spellings that might distract or confuse a reader. Use Yahoo, not Yahoo!; Toys R Us, not Toys "R" Us; E-Trade, not E*Trade. Use an ampersand only if it is part of the company's formal name, but not otherwise in place of and. Use the lowercase unless it is part of the company's formal name.

control center
Use the appropriate proper name, i.e. *Kennedy's Launch Control Center* and *Johnson's Mission Control Center*, on first reference. On second reference, *launch control, mission control* or *control center* are acceptable.

copyright ©, registered trademarks ® and trademarks ™
Do not use the words or symbols denoting copyrights, registered trademarks or trademarks in NASA products.

corrections
See the news release guidelines appendix.

cosmonaut
The Russian word meaning a person trained by a human spaceflight program to command, pilot or serve as a crew member of a spacecraft.

crawler-transporter

crew
Because *crew* is singular, the corresponding pronoun is *it*. Use *crew members* when appropriate.

crewmate

crew member
The International Space Station crew members are home.

crew titles
Lowercase the terms commander, pilot, mission specialist, capsule communicator, payload specialist and flight engineer except when directly preceding a name or names. Avoid lengthy title introductions. *Expedition 15 Commander Fyodor Yurchikhin and Flight Engineers Oleg Kotov and Clay Anderson will move the Soyuz*.

CubeSat
A CubeSat is a type of miniaturized satellite for space research. The accepted aerospace industry standard is to capitalize the C and S in CubeSat. The primary system of measurement for CubeSats is metric. See measurements.

D

dark side of the Moon
See far side.

data
Per AP, data is a plural noun. It normally takes plural verbs and pronouns. Data can become a collective noun and take a singular verb when the group or quantity is regarded as a unit. *The data is sound.* (A unit.) *The data have been collected carefully.* (Individual items.)

dateline
NASA releases and media advisories no longer require a dateline. For reference only, the following are the datelines for NASA's centers and facilities:

Ames	Silicon Valley, California	KSC	Cape Canaveral, Florida
Armstrong	Edwards, California	LaRC	Hampton, Virginia
GISS	New York	MSFC	Huntsville, Alabama
Glenn	Cleveland	NSSC	Stennis Space Center, Miss.
Goddard	Greenbelt, Maryland	Plum Brook	Sandusky, Ohio
HQ	Washington	SSC	Bay St. Louis, Mississippi
IV&V	Fairmont, West Virginia	WFF	Wallops Island, Virginia
JPL	Pasadena, California	WSTF	Las Cruces, New Mexico
JSC	Houston		

deep space
Even when used as a modifier, do not hyphenate.

Deep Space Network
A global system for communicating with interplanetary spacecraft. It consists of three clusters of antennas spaced approximately 120 degrees apart around the world at Goldstone, in California's Mojave Desert; near Madrid, Spain; and near Canberra, Australia.

delta-v
For clarity, refer to the definition, which is the change in velocity. It is a measure for the amount of effort needed to change from one orbit to another. The change in velocity typically is provided by the thrust of a rocket engine.

deorbit
The process of a spacecraft leaving low-Earth orbit as part of its return. The terms *deorbit* and *deorbit burn* are jargon; the preference is to refer to the spacecraft leaving low-Earth orbit.

descend
To come down under control from a higher to a lower altitude.

descent
The action carried out in flying an aircraft from a higher to lower altitude.

Destiny Laboratory
The Destiny Laboratory is the primary lab for U.S. research payloads aboard the International Space Station. Destiny is 28 feet long, 14 feet wide and weighs 16 tons. It launched in 2001 aboard space shuttle Atlantis on the STS-98 mission. *Destiny*, *the laboratory* and *the lab* are acceptable on second reference. See International Space Station.

downlink (n., adj.), down link (v.)
NASA provided a downlink. The space station crew down linked a holiday message.
This is NASA jargon and should be used sparingly.

dwarf planet
Defined by the International Astronomical Union as an object in orbit around the sun that is large enough to have its own gravity pull itself into a round, or nearly round, shape. Generally, a dwarf planet is smaller than Mercury. A dwarf planet also may orbit in a zone that has many other objects in it, such as within the asteroid belt. Currently, five objects are accepted as dwarf planets: Ceres, Pluto, Eris, Makemake and Haumea. Also see the entry for plutoids, which currently are Pluto and Eris, and http://www.iau.org/public_press/themes/pluto/.

E

educator astronaut
A fully-qualified astronaut who has expertise in kindergarten through 12th grade education.

Earth
For NASA, generally capitalize *Earth* to indicate the proper name of the planet. Do not use *the* before *Earth*.

Eastern Test Range
The Eastern Test Range, also known as the Eastern Range, is a rocket range associated with missile and rocket launches from the Cape Canaveral Air Force Station, NASA's Kennedy Space Center and NASA's Wallops Flight Facility. The 45th Space Wing of the United States Air Force manages the Eastern Range. Avoid the abbreviation ETR.

egress
NASA jargon for exiting the International Space Station. Avoid use.

end of mission
The official end of a space mission measured in hours and minutes since time of launch.

equator

ESA (European Space Agency)
ESA followed by spelling out in parentheses, on first reference. Abbreviation only for following references. ESA's 17 member states are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Canada, Hungary, Poland, Romania and the Czech Republic also participate in some projects under cooperative agreements.

evolved expendable launch vehicle, expendable launch vehicle
The rocket used in expendable launch systems are designed to be used only once, and their components are not recovered after launch. The vehicle typically consists of several rocket stages, discarded one by one as the vehicle gains altitude and speed.

NASA's Launch Services Program, which is managed from Kennedy Space Center, oversees processing, integration and launches for NASA missions that launch on expendable launch vehicles and evolved expendable launch vehicles from Cape Canaveral Air Force Station in Florida and Vandenberg Air Force Base in California. Also known as ELVs and EELVs. Delta IV and Atlas V rockets are evolved expendable launch vehicles.

exoplanet
A planet that orbits a star outside our solar system.

exosphere
The outermost region of a planet's atmosphere. See also atmosphere.

Exploration Mission-1 (EM-1)
This is the first integrated launch of the Orion spacecraft and the Space Launch System rocket. Communication teams are encouraged to use Exploration Mission-1 sparingly, and instead use plain language for the public when describing this mission, such as the *"first test flight of SLS,"* the *"first integrated flight of SLS and Orion"* and/or the *"first flight test beyond the moon."*

extravehicular activity
The preferred term is *spacewalk*. Avoid use of the term and its abbreviation to *EVA*.

F

far side of the Moon
Use instead of *dark side* when talking about the hemisphere of the Moon that always faces away from Earth.

Federal Aviation Administration
This government agency oversees all aviation and licensing commercial companies for spaceflight, within the United States. FAA is acceptable on second reference. The FAA controls, for example, airport safety, air traffic control, licensing of pilots and inspection of aircraft, and it investigates aviation mishaps.

female vs. woman
Although exceptions exist, for consistency, *woman* should always be used as a noun and *female* as an adjective. *Eileen Collins was the first woman to command a space shuttle. Sally Ride was the first female American to fly in space.* See male vs. man.

Fermi
NASA's mission to explore the universe in high-energy gamma rays. Previously known as the Gamma-ray Large Area Space Telescope, or GLAST, NASA renamed the telescope Fermi in honor of Professor Enrico Fermi (1901-1954), a pioneer in high-energy physics.

flight day

flight deck
The place from which an aircraft is controlled.

flight suit

fly-around (n.)
The spacecraft undocked from the International Space Station and performed a fly-around before returning to Earth.

flyby (n.), fly by (v.)
The Messenger flyby of Earth took place on Aug. 2, 2005. Messenger is set to fly by Earth on Aug. 2, 2005.

foreign countries
If unsure of the correct spelling, consult the State Department's list at http://www.state.gov/misc/list/index.htm or the CIA's World Factbook at https://www.cia.gov/library/publications/the-worldfactbook/index.html.

free fall (n.)

G

g
gravity. The symbol g is properly written in lowercase and italics to distinguish it from the symbol G, the gravitational constant, which always is written in uppercase; and from g, the symbol for gram, which is not italicized. Written with an Arabic numeral, a space, then the symbol – e.g., *3 g* NOT *3 gs* or *3g*.

g-force
The force of gravity or acceleration on a body, also *acceleration*.

galaxy
Capitalize only the proper noun element of the name – e.g., Milky Way galaxy.

gamma ray
A photon emitted spontaneously by a radioactive substance; also a photon of higher energy than that of an X-ray. The term usually is used in plural. Hyphenate when used as an adjective, as in *Fermi Gamma-ray Space Telescope*.

General Dynamics
Dateline is Falls Church, Virginia, where it is headquartered.

German Aerospace Center
Avoid abbreviation, but, if necessary, abbreviate as DLR, for the Deutsches Zentrum für Luft- und Raumfahrt.

Gemini mission numbers
Use Roman numerals instead of Arabic numerals – e.g., Gemini XII

GLAST
See entry for Fermi.

Glenn, John H. Glenn Research Center in Cleveland
Standard use is NASA's Glenn Research Center. Dateline is Cleveland.

global warming
This term describes the observed and projected increase in Earth's globally averaged atmospheric and oceanic temperatures over time. It is not synonymous with climate change.

Go/No-Go
The launch director is about to do the Go/No-Go poll.

Goddard, Robert H. Goddard Space Flight Center in Greenbelt, Maryland
Standard use is NASA's Goddard Space Flight Center. Dateline is Greenbelt, Maryland.

Goddard Institute for Space Studies
The dateline is New York. NASA's Goddard Institute for Space Studies, known as GISS and located at Columbia University in New York, is a laboratory of the Earth Science Division of NASA's Goddard Space Flight Center and a unit of the Columbia University Earth Institute. Research at GISS emphasizes a broad study of global climate change.

gravity
The force of attraction exerted by all objects with mass. Gravity is the force that gives objects weight, and keeps planets and satellites in orbit. Also see entries for microgravity and zero gravity.

Great Observatories
Capitalized. The Hubble, Compton, Chandra and Spitzer telescopes collectively are known as NASA's Great Observatories.

gyroscope
A device used to sense directional changes and develop signals for operating automatic pilots and inertial guidance systems.

gyro-compass
A compass consisting of a motor-operated gyroscope with a rotating axis that is kept in a horizontal plane. It takes a position parallel to Earth's rotation and points to the geographical North Pole instead of the magnetic pole.

H

Harmony module
Harmony, or Node 2, is the utility hub of the International Space Station. The hub contains four racks that provide electrical power and bus electronic data. It also acts as a central connecting point for several other components. Harmony launched into space on STS-120 in October 2007. See International Space Station.

headlines
NASA style for news releases is to use title case in a headline, which should typically fit on one line. Otherwise, only the first word and proper nouns are capitalized. Follow story style in spelling, but use Arabic numerals for most all numbers and single quotes for quotation marks. Exception: use US and UN (no periods) in all headlines. Do not use "and" in headlines, Instead, use a comma. *NASA Awards Engineering, Research Support Contract*

headquarters
Lowercase, unless referring to *NASA Headquarters in Washington*. The abbreviation *HQ* should be avoided.

heat shield
On a spacecraft, an addition that is designed to protect it from the high temperature of atmospheric entry on a body with an atmosphere, such as Earth or Mars.

heavy-lift (adj.)
NASA's planned heavy-lift rocket is the Space Launch System.

heliophysics
The study of the sun and how it affects space – including changes that have the potential to impact satellites and astronauts. Heliophysics studies the dynamic, interconnected system from the sun, to the space environment around Earth and other planets, out to the edges of the sun's radiative influence where the Voyager spacecraft now reside.

hot fire (adj.)
NASA completed the third hot fire test of an RS-25 engine of the Space Launch System (SLS) at its Stennis Space Center.

Hubble Space Telescope
NASA's Hubble Space Telescope was carried into orbit by space shuttle Discovery on STS-31 in April 1990. Hubble is one of NASA's Great Observatories. Hubble was the only telescope ever designed to be serviced in space by astronauts. On second reference, it is acceptable to refer to the telescope simply as *Hubble* or *the Hubble* or *the telescope*. Avoid use of the abbreviation HST. The Space Telescope Science Institute, located on the Johns Hopkins University Homewood campus in Baltimore, Maryland, is the science operations center for the Hubble Space Telescope and the James Webb Space Telescope.

hypersonic
Velocity greater than five times the speed of sound.

I

illustration
Use to identify an artist's depiction of an object or concept. Not an actual image.

Independent Verification & Validation Facility
Dateline is Fairmont, West Virginia. It's a division of NASA's Goddard Space Flight Center. Often referred to as IV&V, the full name should be spelled out in news releases: *NASA's Independent Verification & Validation Facility.* It was established in 1993.

Indian Space Research Organization
Avoid abbreviation, but, if necessary, abbreviate to ISRO.

in-flight (adj.)
The International Space Station crew conducted an in-flight interview.

ingress
NASA jargon for entering the International Space Station. Avoid use.

in-orbit (adj.), in orbit (n.)
NOT on-orbit. *After eight years of in-orbit operations that gave astronomers a completely new perspective on the universe, NASA has concluded the Far Ultraviolet Spectroscopic Explorer mission. The Hubble Space Telescope is in its second decade in orbit.*

in-situ resource utilization
Describes the proposed use of resources found or processed on other planetary bodies (the Moon, Mars, etc.) to further the goals of a space mission. As this is not a well-known term, either provide a description or use the expression *living off the land.*

interim cryogenic propulsion stage
Lowercase in all uses.

international names
Keep proper names in the spelling of the language of origin. For place names, translate as applicable. *The University of Vienna contributed to the study.* NOT *The Universität Wien contributed to the study.*

International Space Station
On second reference, *space station, station, orbiting laboratory* or *orbital outpost.* Avoid use of the abbreviation *ISS* in external products, unless it's part of a proper name – e.g., ISS Progress spacecraft. International Space Station crew missions are designated as *Expeditions.* On first reference, International Space Station or space station should precede the Expedition designation – e.g., *International Space Station Expedition 35, space station Expedition 36/37.*

See *Destiny Laboratory, Harmony module, Kibo module, Tranquility node, Quest Joint Airlock, Unity connecting module, Zarya module* and *Zvezda service module.*

internet addresses (URLs)
News releases should contain links for additional information. Use https://www.nasa.gov in contract releases and as a default in other products if no other links are applicable. Per AP, include https://. Work with the Digital Services team at NASA Headquarters to determine the simplest URL that is applicable. Use URLs within the NASA domain, although additional or outside URLs are acceptable for joint releases. See Hyperlinks and URLs.

internet terms
Internet, web, webcast, website, webpage, webcam, webmaster, podcast, vodcast, email.

ionosphere
A complex atmospheric zone of ionized gases that extends between 50 and 400 miles (80 to 640 kilometers) above Earth's surface. It's located between the mesosphere and the exosphere and is included as part of the thermosphere. See also atmosphere.

Italian Space Agency
Avoid abbreviation, but, if necessary, abbreviate to ASI for Agenzia Spaziale Italiana.

J

James E. Webb Memorial Auditorium
The public auditorium at NASA's Headquarters. Use the full title in news releases and media advisories.

James Webb Space Telescope
Avoid use of the abbreviation JWST. Webb or Webb telescope can be used on second reference. The Space Telescope Science Institute, located on Johns Hopkins University's Homewood campus in Baltimore is the science operations center for the James Webb Space Telescope.

Japan Aerospace Exploration Agency
Avoid abbreviation, but, if necessary, abbreviate to JAXA.

Jet Propulsion Laboratory
Standard use is NASA's Jet Propulsion Laboratory. Dateline is Pasadena, California. Acceptable to use *JPL* on second reference. *The California Institute of Technology in Pasadena, California, manages JPL for NASA.*

Johnson, Lyndon B. Johnson Space Center
Standard use is NASA's Johnson Space Center. Dateline is Houston.

Journey to Mars
Capitalize when referencing the agency's umbrella initiative to explore Mars, versus a specific mission traveling to Mars.
> *The spacecraft now is on a journey to Mars.*
> *The astronauts will join other residents on the station to continue important research that advances NASA's Journey to Mars*

K

Kazakhstan

Kennedy, John F. Kennedy Space Center
Standard use is NASA's Kennedy Space Center. Dateline is Cape Canaveral, Fla. However, within the body of a news release, the locator is Kennedy Space Center, Florida. The Merritt Island National Wildlife Refuge is located in Kennedy Space Center and shares the same boundaries.

Kibo module
Kibo is the largest International Space Station module, consisting of three parts. The pieces were launched on space shuttle missions STS-123, STS-124 and STS-127. Kibo also is called the Japanese Experiment Module. Kibo is not an acronym but the Japanese word meaning "hope." See International Space Station.

Kourou, Guiana

Kuiper Belt
A disk-shaped region of icy debris about 2.8 billion to 4.6 billion miles (4.5 to 7.5 billion km) from our Sun.

Kwajalein Atoll
The Kwajalein Atoll is part of the Republic of the Marshall Islands in the South Pacific Ocean. The southernmost and largest island in the atoll is named Kwajalein Island. Eleven of the 97 islands are leased by the United States and are part of the Ronald Reagan Ballistic Missile Defense Test Site, the only U.S. government equatorial launch facility. SpaceX established Omelek Island in the atoll as its primary launch location.

L

laboratory
Lowercase. For laboratory modules of the International Space Station, uppercase the formal name. *Columbus laboratory, Destiny laboratory, Kibo laboratory*.

Lagrange, Lagrangian
The preferred term is *Lagrange*. There are five Lagrange points; each is one point in the plane of orbit of one body around another (e.g., the Moon around Earth) at which a small third body can remain stationary with respect to both.

Langley, Samuel P. Langley Research Center
Standard use is NASA's Langley Research Center. Dateline is Hampton, Virginia.

lateral axis
The axis extending through the center of gravity of an aircraft, and parallel to a line connecting the tips of the wings. The lateral axis is sometimes called the "y" axis. Pitch is a motion around the lateral axis.

latitude
Linear or angular distance that is measured north or south of the equator in degrees, minutes and seconds.

launch abort system
Lowercase in all uses.

launch complex
The launch complex at NASA's Kennedy Space Center includes both launch pads 39A and 39B. It should be lowercase except when used as a proper noun: *Launch Complex 39*.

Launch Control Center, launch control
The location from which NASA controls the launch of the space shuttle or other launch vehicles. On second reference, *launch control* or *control center* is acceptable.

launch pad
Lowercase except when used to name a specific launch pad – e.g., Launch Pad 39B.

Launch Complex 39A
NASA signed a 20-year lease in April 2014 with SpaceX to operate and maintain the historic launch pad at NASA's Kennedy Space Center.

launch time
For launches in the United States, launch time always should be given in the time zone in which the launch takes place. For launches outside the United States, give the launch time in Eastern when it will be covered live on NASA Television, per AP television coverage guidance. If it will not be carried on NASA TV, give the time in the U.S. based on which NASA center is most responsible, followed by the local time. An International Space Station release from Houston should list a launch from Baikonur, Kazakhstan in Eastern time first, followed by Kazak time: *The launch is scheduled for 2:13 p.m. EST on Jan. 24 (1:13 a.m. on Jan. 25 Kazakh time).*

launch vehicle
It is acceptable in most cases to simplify to the term *rocket.*

leading edge
The front edge of an airfoil or wing. The leading edge normally is rounded and thicker than the trailing edge.

lift off (v.), liftoff (n., adj.)
NASA's Phoenix Mars Lander is scheduled to lift off Saturday, Aug. 4, at 5:26 a.m. EDT. Liftoff of the Dawn mission to study a pair of asteroids was Thursday, Sept. 27, 2007, from the Cape Canaveral Air Force Station, Florida at 7:34 a.m. EDT.

light-year
Hyphenated. The distance light travels in one year at the rate of 186,282 miles per second. It equals approximately 5.88 trillion miles (5,878,612,800,000 miles).

liquid oxygen
Rocket propellant. Avoid use of the acronym LOX.

Lockheed Martin Corporation
Headquarters is in Bethesda, Maryland. Lockheed Martin Space is located in Littleton, Colorado. Denver is usually used for the locator.

longitude
Linear or angular distance that is measured west or east of the Prime Meridian in degrees, minutes and seconds.

longitudinal axis
The axis extending through the center of the fuselage from the nose to the tail. The longitudinal axis is sometimes called the "x" axis. Roll is a motion around the longitudinal axis.

low-Earth orbit
Although Webster's does not capitalize *earth* when used in this context, NASA does so because it refers specifically to a low orbit around planet Earth. Also, low-Earth is hyphenated like near-Earth object. Avoid using the acronym LEO.

Lunar Orbital Platform-Gateway
Capitalized. It may be shortened to *the gateway* on second and subsequent references. Do not refer to it as LOP-G.

M

magnetic variation
The difference between true north and magnetic north, varying with position; magnetic variation drifts with time.

main gear
The largest landing gear under the fuselage of an aircraft or for the space shuttle. Main gear are augmented either by nose gear or tail gear.

male vs. man
Although exceptions exist, for consistency, *male* should always be used as an adjective and *man* as a noun. *John Glenn was the first American male astronaut to orbit the Earth. Neil Armstrong was the first man to walk on the Moon.* See female vs. woman.

mankind
Avoid use. Per AP, frequently the best choice is a substitute such as *humanity*.

manned, unmanned
Avoid use. In many cases, the distinction is unnecessary or implied. Substitute terms such as *autonomous, crewed, human, piloted, unpiloted, robotic, remotely piloted*.

Marshall, George C. Marshall Space Flight Center
Standard use is NASA's Marshall Space Flight Center. Dateline is Huntsville, Alabama.

Martian
Capitalize nouns and adjectives derived from the proper names of planets.

measurements
Do not use metric measurements unless they are the universally accepted form of measurement (e.g., 35 mm film, CubeSat measurements) or where the metric distance is an important number in itself. It is acceptable to use metric in a joint news release with an international partner. When using metric measurements, include the Imperial conversion in parentheses or provide an equivalent – e.g., approximately the size of a football field.

memorandum of understanding
A legal document describing a bilateral or multilateral agreement between parties, indicating an intended common line of action. It may not imply a legal commitment and, in some cases, lacks the binding power of a contract. The acronym, when used, is MOU.

mesosphere
The region of Earth's atmosphere above the stratosphere and below the thermosphere, between about 30 and 50 miles (50 and 80 kilometers) in altitude. See also atmosphere.

Michoud Assembly Facility
Standard use is NASA's Michoud Assembly Facility. Dateline is New Orleans. It should be referred to as Michoud on second reference, not MAF.

microgravity
A term commonly applied to a condition of free fall within a gravitational field in which the weight of an object is reduced compared to its weight at rest on Earth. A term used synonymously with *weightlessness*.

middeck

midbody

Mission Control Center, mission control
The location from which NASA controls the International Space Station at NASA's Johnson Space Center in Houston. On second reference, *mission control* or *control center* is acceptable.

mission directorate
Capitalized only as part of a formal name, such as *Science Mission Directorate*.

mission milestones
Critical design review, preliminary design review, mission concept review, and other mission milestones, should not be capitalized. Abbreviate after the first mention.

mission specialist
Lowercase except when directly preceding a name or names. *Mission Specialist Andrew Thomas performed the spacewalk. Mission Specialists Tracy Caldwell and Rick Mastracchio participated in the media opportunity.* Also see the entry for crew titles.

mobile launcher
A 355-foot-tall structure being developed at NASA's Kennedy Space Center to support launching the agency's Space Launch System (SLS) rocket and Orion spacecraft. *The mobile launcher will be used along with the crawler-transporter to move the SLS with Orion on top from Kennedy's Vehicle Assembly Building to Launch Pad 39B.*

mobile launcher platform
A two-story structure, used along with the crawler-transporter, that was used to transport the space shuttle from the Vehicle Assembly Building to either launch pad 39A or 39B at NASA's Kennedy Space Center. It also served as the vehicle's launch platform. Do not use mobile launch platform. The structures may be used with commercial company spaceflight operations based out of Kennedy.

Moon and moon
Lowercase unless referring to Earth's Moon. When talking about the hemisphere of the Moon that always faces away from Earth, use the term *far side*, not *dark side*.

multi-user
Per AP style for prefixes, this should be hyphenated. *Kennedy Space Center is America's multi-user spaceport.*

N

National Aeronautics and Space Administration
NASA is acceptable on all references.

NASA Headquarters
Capitalize *headquarters* only in this context. This use differs from that of the other NASA centers, which use the possessive form *NASA's*. The abbreviation *HQ* should be avoided.

NASA Television
No hyphen. NASA TV on second reference. The tagline for news releases is *For NASA TV streaming video, downlink and schedule information, visit https://www.nasa.gov/nasatv*. Use https://www.nasa.gov/live to direct readers to NASA TV coverage.

nation

National Space Agency of Ukraine

nautical terms
Avoid the use of nautical terms such as aft, port and starboard, when possible. Substitute directional terms.

near-Earth object
Comets and asteroids that have been nudged by the gravitational attraction of nearby planets into orbits that allow them to enter Earth's neighborhood. (Because *near-Earth* is a compound modifier of object, it is hyphenated.)

nebula (singular), nebulas (plural)
Capitalize when used with name of specific nebula – e.g., Horsehead Nebula.

news conference
Per AP style, news conference is the preferred term. Also, use *news release* instead of *press release.*

news release
The preferred term. Avoid the use of *press release.*

newsroom, news center

news release format
See appendix "Guidelines for NASA News Releases."

Node 1
See Unity connecting module.

Node 2
See Harmony.

Node 3
See Tranquility.

nominal
Avoid. Instead, use *normal* or *normally.*

North Pole
Capitalize for the geographic region on Earth, one of the two points where Earth's axis of rotation meets Earth's surface. Also known as the Arctic. If referring to the magnetic pole, say so. Lowercase *north pole* on other celestial bodies.

Northrop Grumman Corporation
Dateline is Los Angeles. Northrop Grumman Space Technology is the aerospace sector's headquarters and is located in Redondo Beach, California. The company's aeronautics sector, called Integrated Systems, is located in El Segundo, California.

nose gear
The landing gear nearest the nose of the aircraft; usually under the cockpit.

Numbers
See Arabic numerals and Roman numerals.

O

onboard vs. aboard
Aboard and onboard mean almost the same thing, but the preferred term is aboard. The term onboard may be used as an adjective to refer to something carried within or occurring aboard a vehicle – e.g., an onboard guidance system. Avoid use of on board as a noun.

one-year mission or **yearlong mission**

on-orbit
Avoid use of this term, which is jargon. Use *in-orbit* (adj.) or *in orbit* (n.).

on-site

Oort Cloud
The Oort Cloud is a spherical region of space that surrounds our Sun and occupies space at a distance between 5,000 and 100,000 astronomical units (AU).

o-ring

Orbital ATK
Its dateline is Dulles, Virginia, the location of its headquarters. Formerly *Orbital Sciences Corporation*.

Orion (multi-purpose crew vehicle)
The name for NASA's deep space spacecraft. Orion is designed to take astronauts farther into space than ever before, including an asteroid and Mars. Orion is capitalized as the proper noun, while multi-purpose crew vehicle is lower cased and not typically used to identify this crew capsule. Module names should be in lowercase – e.g., Orion service module.

ozone
O3, a triatomic form of oxygen. In the upper atmosphere, it forms a protective layer against excess ultraviolet radiation. In the lower atmosphere, it is an ingredient of photochemical smog. The upper atmosphere, from about 8 to 30 miles above Earth, is where most atmospheric ozone is concentrated; it is depleted by industrial pollutants, such as fluorocarbons from aerosol sprays.

P

payload
Anything that a flight vehicle carries beyond what is required for its operation during flight.

pilot
Lowercase except when directly preceding a name. See also the entry for crew titles.

pitch
A rotational motion in which a spacecraft or aircraft turns about its lateral axis. Pushing forward on the control stick will lower the elevators, which forces the tail upward. The pilot will then see the nose of the aircraft fall, or pitch.

Plum Brook Station
A satellite facility of NASA's Glenn Research Center. The dateline is Sandusky, Ohio. It is located on 6,400 acres of land near Sandusky, 56 miles west of Cleveland. It's an active testing and research installation housing some of the world's most advanced space environment simulation facilities. On first reference, *NASA's Plum Brook Station.*

photo captions
Each photo caption is treated as a unique document. Therefore, use the standard format for first reference for astronaut names, company names, etc.

plutoid
Plutoids are celestial bodies in orbit around the sun at a semimajor axis greater than that of Neptune, have sufficient mass for their self-gravity to overcome rigid body forces so that they assume a near-spherical shape, and have not cleared the neighborhood around their orbit. Satellites of plutoids are not plutoids themselves, even if they are massive enough that their shape is dictated by self-gravity. The two known and named plutoids are Pluto and Eris. See dwarf planet.

port
The side of a ship or aircraft that is on the left when one is facing forward.

portal
Refers to the NASA website. Avoid external use of the term.

postflight

postlaunch

Pratt & Whitney
The company is headquartered in East Hartford, Connecticut. It is a United Technologies Company.

preflight

prelaunch

press release
Don't use. The preferred term is *news release*.

principal investigator
Capitalize when using as a title preceding a name.

probe
A device used to penetrate or send back information from outer space or a celestial body. Space probes destined for a planet or other astronomical body may be on a mission to fly by, impact, orbit or land. See spacecraft and satellite.

Program, project
The word *program* within NASA refers to top-level initiatives under the mission directorates. A project is an individual venture under those programs. *The Graduate Student Research Project is an opportunity offered by NASA's Higher Education Program.* On second reference, *the program* or *the project* is preferred.

Progress spacecraft
Progress is a Russian expendable cargo spacecraft that resupplies the International Space Station about three or four times a year. When referring to a particular Progress spacecraft, indicate its International Space Station designation *ISS Progress 40* or *ISS Progress 41*.

pronunciation guides
In press kits and fact sheets, include a pronunciation for any name with a pronunciation that could be in doubt for people and things. *ESA (European Space Agency) astronauts Hans Schlegel (SHLAY-guhl) and Leopold Eyharts (a-arts) visited the International Space Station in 2008.*

public
Never *general public*

Q

question-and-answer session

Quest Joint Airlock
Quest is the primary airlock for the International Space Station. Quest consists of two segments: the equipment lock and the crew lock.

QuikScat
Use *NASA's Quick Scatterometer satellite* on first reference. Abbreviate as *QuikScat* on second reference.

R

Raytheon Company
Headquarters is in Waltham, Massachusetts. Raytheon Space and Airborne Systems (SAS) is located in El Segundo, California.

Red Planet
An acceptable synonym for Mars on second reference.

re-entry

remotely piloted aircraft (RPA)
Generally refers to the MQ-1 Predator, MQ-9 Reaper and RQ-4 Global Hawk. Unmanned Aerial System (on first reference) and *UAS* (on following references) also are acceptable terms when referring to an unmanned aircraft and associated systems. Do not use *UAV* or *operator;* the aircraft is flown by an RPA pilot.

Return to Flight
Capitalized. It refers to a period of time preparing to resume space shuttle missions and the flights themselves following the Challenger and Columbia accidents – e.g., Return to Flight modifications and NASA's Return to Flight mission STS-114.

reusable solid rocket motor
The propellant segments of the solid rocket boosters. Use solid rocket boosters to describe the entire system, which includes the reusable solid rocket motors.

rocket
Lowercase in all instances.

Rocketplane Kistler
Dateline is Oklahoma City, where it is headquartered.

roll
Rock or oscillate around an axis parallel to the direction of motion.

roll around (v.), rollaround (n.)
The action or procedure of a spacecraft moving from one launch pad to another.

roll out (v.), rollout (n.)
The action or procedure of a spacecraft moving from a processing facility to the launch pad. Also describes the unveiling or debut of a new or significantly changed aircraft.

Roman numerals
The use of Roman numerals should be avoided, particularly in reference to mission numbers. Arabic numerals should be used for clarity. Roman numerals are acceptable for formal names, particularly in reference to specific rockets such as the Saturn V, Delta IV and Atlas V rockets.

Roscosmos
As of Jan. 1, 2016, the new name of Russia's space agency is Russian Roscosmos State Corporation. Use *Russian space agency Roscosmos* on first reference and *Roscosmos* on following references.

rover
Lowercase.

Russian Roscosmos State Corporation
See Roscosmos.

S

satellite
Term used to refer either to a celestial body orbiting another of larger size or to a manufactured object or vehicle intended to orbit Earth, the Moon or another celestial body. Spacecraft that do not enter into an orbit should not be referred to as satellites. See probe and spacecraft.

Satish Dhawan Space Centre, India

serial commas
Per AP style, do not put a comma before the conjunction in a simple series. Put a comma before the concluding conjunction, however, if an integral element of the series requires a conjunction. *The program focuses on technology, research and development, and mission operations.*

service module
Do not capitalize.

Shuttle Landing Facility
The Shuttle Landing Facility at NASA's Kennedy Space Center covers 500 acres, has one of the longest runways in the world and consists of an extremely high-friction concrete strip designed to maximize the braking ability of the space shuttle at its high landing speed. The runway is designated runway 15 or runway 33, depending on the direction of use.

In June 2015, NASA signed a 30-year property agreement with Space Florida to operate and manage the Shuttle Landing Facility.

Avoid use of the abbreviation SLF.

SLS
See Space Launch System.

solid rocket booster
One of the pencil-shaped first stage boosters that will be used to launch NASA's Space Launch System during its 2018 flight test and used to help launch the space shuttle. Avoid use of the abbreviation, SRB.

solar radiation
The electromagnetic radiation (energy) emitted by the sun.

solar system
A grouping of a sun and other celestial objects gravitationally bound to it. In our system this includes: the eight planets, their 165 known moons, three dwarf planets (Ceres,

Pluto, and Eris and their four known moons), and billions of small bodies, including asteroids, Kuiper Belt objects, comets, meteoroids, and interplanetary dust.

South Pole
Capitalize for the geographic region on Earth, one of the two points where Earth's axis of rotation meets Earth's surface. It is located on the continent of Antarctica. If referring to the magnetic pole, say so. Lowercase south pole on other celestial bodies.

Southwest Research Institute (SwRI)
Do not precede name with *the*. Spell out on first reference and abbreviate *SwRI* thereafter. *Southwest Research Institute (SwRI) is an independent, nonprofit applied research and development organization.* Headquarters dateline is San Antonio. Dateline for the Planetary Science Directorate is Boulder, Colorado.

space
Avoid use of the term *outer space*.

SpaceX (Space Exploration Technologies Corp.)
Located in Hawthorne, California. SpaceX is acceptable on first reference, in most cases. Space Exploration Technologies (SpaceX) should be used in more formal situations, such as in a contract release.

Space Act Agreement
Arrangements concluded under the "other transactions" authority of the Space Act are commonly referred to as Space Act Agreements. NASA uses this authority to enter into a wide range of agreements with numerous entities to advance NASA mission and program objectives. Avoid use of the abbreviation, SAA.

Space Age (n.), space-age (adj.)
Per AP, the Space Age began with the launching of Sputnik 1 on Oct. 4, 1957.

spacecraft
Term used to refer to a vehicle or device, with or without a human crew, that is designed for travel or operation outside Earth's atmosphere. A spacecraft that enters into an orbit around Earth, the Moon or another celestial body also is called a satellite. See also probe and satellite.

Spacehab
This company's name often is inconsistently used in all caps. It is not an acronym. The name should not be all in uppercase.

Space Launch System (SLS)
NASA's heavy-lift rocket under development that will launch NASA's Orion spacecraft from the agency's Kennedy Space Center Launch Pad 39B on deep space missions. SLS is acceptable on second reference.

Space Launch System (SLS) metric ton guidance
To be consistent with the aerospace industry and for "branding" identification purposes, NASA will break from AP style by listing the two types of SLS rockets on first reference with the metric-ton first and the tons (short tons) after in parentheses and then continue to use the metric-ton designation on following references
- 70-metric-ton (77-ton)
- 130-metric-ton (143-ton)

spacefaring

spaceflight
One word except when part of a NASA center name or similar title, such as NASA's Goddard Space Flight Center.

spaceflight participant
Lowercase. See crew titles for more information.

Space Mirror Memorial
This is the correct name of the fallen astronaut memorial at the Kennedy Space Center Visitor Complex in Florida.

spaceplane

spaceport

space race

spaceship

space shuttle
Per AP style, lowercase. The exception is *Space Shuttle Program.*

Space Shuttle Program, shuttle program
Capitalize only when referring to the complete name of the program.

space station
See International Space Station.

space station components
Proper names of components should be capitalized – e.g., Destiny, Harmony, Zvezda. Lowercase the description – e.g., the U.S. Destiny laboratory module.

spacesuit
NASA prefers the compound word, deviating from Webster's, which lists it as two words.

space-time

spacewalk

starboard
The side of a ship or aircraft that is on the right when facing forward.

Stardust
The mission title is not an acronym.

Stennis, John C. Stennis Space Center
Standard use is NASA's Stennis Space Center. Dateline is Bay St. Louis, Mississippi. However, within the body of a news release, the locator is Stennis, Mississippi. The possessive form is *Stennis'*.

stratosphere
The layer of Earth's atmosphere above the troposphere, extending to about 31 miles (50 kilometers) above Earth's surface (the lower boundary of the mesosphere). It is stable and characterized by low moisture content and absence of clouds. See also atmosphere.

suborbital

subsonic
Velocity less than the speed of sound. The MD-11 is a subsonic aircraft because it never flies faster than the speed of sound.

Sun
Capitalize when referring to Earth's star, lowercase when referring to another solar system's star.

supermassive

supersonic
Velocity greater than the speed of sound. The SR-71 is characterized as a supersonic aircraft because it travels from three to four times faster than the speed of sound. A supersonic aircraft can fly from New York to London in less than two hours.

T

Tanegashima, Japan
The headquarters of the Japan Aerospace Exploration Agency, the Tanegashima Space Center spaceport, is located at the southeastern end of this island.

teleconference
Avoid use of the shortened *telecon*.

telephone numbers
AP style is to use hyphens. *For more information, call the newsroom at 202-358-1600.*

thermal protection system
Should be clarified as the spacecraft's heat shield on first reference.

thermosphere
The region of the atmosphere above the mesosphere and below the exosphere or height at which the atmosphere ceases to have the properties of a continuous medium. It includes the ionosphere. See also atmosphere.

thrust
The forward force generated when a propeller, jet engine or rocket engine sends a jet of fluid (such as air or burning fuel) rearward. The forward thrust is described by Newton's third law: for every action, there is an equal and opposite reaction.

time
Times for events in the United States should be listed based on where the activities take place, such as where a launch occurs or where a news conference is held. For launches or activities outside the United States, give the time in Eastern when it will be covered live on NASA Television, per AP television coverage guidance. If it will not be carried on NASA TV, give the time in the United States based on which NASA center is most responsible, followed by the local time.

To be consistent with AP style and the major television networks, Eastern time should be considered the default for all events broadcast on NASA Television. The local time can be indicated as such in a parentheses. This is to benefit a nationwide audience and be closer in sync with AP Style. *NASA's Ames Research Center, Silicon Valley, California, will hold a news conference at 4 p.m. EST (1 p.m. PST), which will be carried live on NASA Television.*

For events "off-planet," such as activities on the International Space Station, Moon and planetary events that will be carried live on NASA TV, use Eastern time. If it will not be carried live on NASA TV, use the time where the mission control center in charge of the event is located.

timeframe
Avoid using after a time or date range – e.g., use *late November* rather than *late November timeframe.*

time element
Per AP style, use days of the week, not *today, tomorrow* or *tonight.* The only exception is the use of *today* when issuing a media advisory for an event taking place the same day.

In a break with AP style for greater clarity, use the day of the week in addition to the date for upcoming events within a month of the day the release is issued. Otherwise, use of the date alone for an event longer than a month away is acceptable. For example, a news product issued Aug. 3 would state: *The launch is scheduled for Wednesday, Aug. 8.* or *The launch is scheduled for Sept. 20.*

For series of time or dates, consider the context when deciding whether to use a hyphen. If the time is introduced with "from," the words "to" or "through" should be used between the time elements. *The crew interviews will take place from 2 to 4 p.m.* When used as a parenthetical, hyphens are sufficient: *During the mission, scheduled April 10-21, the crew will complete three spacewalks.*

touch down (v.), touchdown (n.)
To reach the ground or land; the act or moment an aircraft or spacecraft lands.

Tranquility node
Tranquility, or Node 3, contains the most advanced life support systems ever flown in space and arrived to the International Space Station in 2009. See International Space Station.

transonic
Velocity between nine tenths (0.9) and one and four tenths (1.4) times the speed of sound.

tropopause
The boundary between the troposphere and the stratosphere, about 5 miles (8 km) in polar regions and about 9 miles (15 km) in tropical regions, usually characterized by an abrupt change of temperature in relation to height. The regions above the troposphere have increased atmospheric stability compared to those below. The tropopause marks the vertical limit of most clouds and storms. See also atmosphere.

troposphere
The lowest region of the atmosphere, extending from Earth's surface to a height of about 4 to 6 miles (6-10 km), the lower boundary of the stratosphere. The area where temperature generally decreases with altitude, clouds form, precipitation occurs and convection currents are active. See also atmosphere.

truss segments
Spell out the truss' name, then use the letter and number designation with reference to its location on the International Space Station – e.g., The starboard 3, or S3, truss segment on the right side of the station; or, P6 on the left side of the station.

U

United Launch Alliance
Its dateline is Denver, where it is headquartered. Abbreviated to ULA on second reference.

United Space Alliance
Its dateline is Houston, where it is headquartered. Abbreviated to USA on second reference.

universe

unmanned, manned
Avoid use. In many cases, the distinction is unnecessary or implied. Substitute terms such as *autonomous, crewed, human, piloted, unpiloted, robotic, remotely piloted*.

unmanned aerial systems (UAS)
Use unmanned aerial system on first reference and UAS on the following references. Refers to the unmanned aircraft AND associated systems.

unmanned aircraft (UA)
Use when referring to just the aircraft. The abbreviation UA is acceptable on second reference. Used interchangeably with remotely piloted aircraft and its abbreviation RPA.

unmanned aerial vehicles
Avoid use of this term and its abbreviation of UAV. See remotely piloted aircraft or unmanned aircraft.

U.S. Army's Yuma Proving Ground
Located in Arizona, the Yuma Proving Ground is one of the largest military installations in the world. NASA tests Orion spacecraft parachute systems at the military installation.

Unity connecting module
The Unity connecting module, also known as Node 1, was the first U.S.-built component of the International Space Station. Essential space station resources such as fluids, environmental control and life support systems, electrical and data systems are routed through Unity. Unity was carried into orbit in December 1998 aboard space shuttle Endeavour's STS-88 mission. See International Space Station.

V

Van Allen Belts
Radiation belts that encircle Earth and are held in place by the planet's magnetic field.

Vehicle Assembly Building
A facility at NASA's Kennedy Space Center, Florida, where space shuttles and the Saturn V rocket for the Apollo program were prepared for missions before being moved to Kennedy's launch pads. Also where NASA's Orion spacecraft and Space Launch System rocket, as well as potentially commercial companies' launch vehicles, will be prepared for flight before being moved to the launch pad. The facility's 129,428,000 cubic feet of work space make it one of the world's largest buildings in terms of usable volume. The building measures 525 feet tall. Avoid use of the abbreviation *VAB*, when possible.

W

Wallops Flight Facility
Dateline is Wallops Island, Virginia. Wallops is a part of NASA's Goddard Space Flight Center. On first reference, identify as *NASA's Wallops Flight Facility on Wallops Island, Virginia.*

Western Launch and Test Range
Also called the Western Range, it is a space launch range located at Vandenberg Air Force Base in California. Operated by the 30th Space Wing, the range begins at the coastal boundaries of Vandenberg and extends westward to the Marshall Islands, including sites in Hawaii on Oahu and Molokai. Avoid use of the abbreviation WLTR.

White Room
An environmentally controlled chamber at the outer end of the access arm platform on a launch pad that astronauts use to prepare to enter a spacecraft. The White Room was used during the space shuttle era at Kennedy Space Center and will be used with NASA's Orion and Space Launch System.

White Sands Test Facility
Dateline is Las Cruces, New Mexico. White Sands is a division of NASA's Johnson Space Center. On first reference, identify as *NASA's White Sands Test Facility in Las Cruces, New Mexico.*

wave off
The preferred term used when NASA chooses to forgo a landing opportunity. *NASA decided to wave off the first landing opportunity today.*

weightlessness
A term commonly applied to a condition of free fall within a gravitational field in which the weight of an object is reduced compared to its weight at rest on Earth. A term used synonymously with microgravity and zero gravity.

wind tunnel
Tubular structure or passages in which high-speed movements of air or other gases are produced. Objects such as engines, aircraft, airfoils and rockets are placed inside the wind tunnel so researchers can investigate the airflow around them and the aerodynamic forces acting upon them.

winter storms
Do not identify winter snowstorms by the proper names bestowed by The Weather Channel.

World Wide Web
Additionally, *web, webcast, website, webpage, webcam, webmaster,* unless it's a formal title then it would be *Webmaster.*

XYZ

X-ray

yaw
A rotational motion in which the aircraft turns around its vertical axis. This causes the aircraft's nose to move to the pilot's right or left. Pushing the right rudder pedal will tilt the rudder to the right. The pilot will see the nose of the aircraft turn to the right.

yearlong mission or one-year mission

Zarya module
Also known as the functional cargo block, Zarya was the first module of the International Space Station. It was launched on a Russian Proton rocket in November 1998 and provided electrical power, storage, propulsion and guidance while other modules with more functionality were built. Zarya is now used for storage. Zayra is not an acronym; it is a Russian word meaning "dawn" because it signified the dawn of a new era of international cooperation in space. See International Space Station.

zero gravity
A term commonly applied to a condition of free fall within a gravitational field in which the weight of an object is reduced compared to its weight at rest on Earth. A term used synonymously with microgravity and weightlessness.

Zvezda service module
Zvezda provides some of the International Space Station's life support systems as well as living quarters for two crew members. Zvezda launched on a Proton rocket in July 2000. Zvezda is not an acronym but the Russian word meaning "star." See International Space Station.

APPENDICES

Guidelines

Release of Public Information

This document outlines operating procedures for public affairs officers at NASA Headquarters and the agency's field centers regarding the release of public information from NASA. It supports NASA's Office of Communications Policy for the Release of Public Information. This document includes information about:
- (A) Planning
- (B) Proper release point and format
- (C) Review and approval
- (D) Release of information by external institutions, contractors, etc.
- (E) Responsibility of headquarters mission directorates

Release of Media Products and Public Information
These procedures govern the release of public information, which is defined as information in any form provided to news and information media, especially information that has the potential to generate significant media or public interest or inquiry. Examples include, but are not limited to, news releases, media advisories, web articles, television programming and web postings.

Not included under this definition are scientific and technical reports, web postings designed for technical or scientific interchange, and technical information presented at professional meetings or in professional journals. References to "mission directorates" and "mission directorate public affairs officers" in this document also include other NASA offices served by public affairs operations, such as education, external relations, facilities, etc.

(A) Planning

Step A1
Each headquarters public affairs officer assigned to a mission directorate or other NASA function (education, external relations, etc.) will coordinate as frequently as necessary (daily or weekly) among appropriate centers to support the release of public information and media product activities.

Step A2
Center public affairs directors or their designees will maintain a planning calendar of upcoming center media products and events and will coordinate this information with the mission directorate public affairs officers.

Step A3
The associate administrator for communications, or designee, will maintain a planning calendar of upcoming media products and events agencywide. Currently, this calendar is hosted in SharePoint and available to communications professionals across the agency. The associate administrator for communications, or designee, also will

distribute this information to center and headquarters communications employees on a regular basis.

(B) Proper Release Point and Format

Step B1
Under the supervision and concurrence of the center public affairs director, the initiating center public affairs officer will (1) make an initial assessment of the relative news value of a topic; (2) recommend to the lead mission directorate public affairs officer a release format (news release, status report, media teleconference, NASA Science Update, news conference, web article, social media activity, opinion editorial, letter to the editor, etc.); and (3) recommend the release point (headquarters or center-regional).

For releases involving the science community, the release draft requires the concurrence of appropriate personnel including the division director and/or program executive/scientist. Center public affairs officers should notify their headquarters counterparts immediately of any future release being drafted.

For releases involving space operations, aeronautics and education communities the release draft will involve the concurrence of appropriate personnel such as the lead engineer/program manager and other concurrences as identified by the center public affairs director.

Step B2
The associate administrator for communications, or designee, shall make final decisions in a timely manner on news value, format, release point (headquarters or center-regional), and timing of the release.

Centers may, without the full coordination of headquarters, issue public information that is institutional in nature, of local interest, or after consultation with the headquarters public affairs officer and program/project officials, or has been deemed not to be a headquarters release. However, the center public affairs director is required to provide proper notification to the NASA Office of Communications at headquarters prior to release. (See NASA Public Affairs Policy, Public Information Coordination and Concurrence, Paragraph D).

(C) Review and Approval

Step C1
The center public affairs office is responsible for concurrence by the appropriate center officials prior to forwarding final documents to headquarters. The mission directorate public affairs officer is responsible for coordinating a timely headquarters review and approval process, which includes review and approval by the mission directorate point of contact and review by the headquarters public affairs newsroom.

Coordination and approval of all media products will be completed within three working days of receipt by headquarters, unless exceptions are agreed upon in advance by senior management of the mission directorate. Two days will be allocated for review and approval by the mission directorate point of contact and one day will be allocated for review by the headquarters newsroom.

It is the responsibility of the mission directorate public affairs officer to track the progress of media products from the time they are sent to headquarters by a center public affairs office until release. If a media product cannot be processed and issued within the three-working-day time period, the assistant administrator of public affairs, press secretary and the center public affairs director will be notified of the reason(s) by the mission directorate public affairs officer.

- After a media product has been drafted and cleared by the appropriate center parties, the center public affairs office will send the draft product to the appropriate mission directorate public affairs officer.
- The mission directorate public affairs officer is responsible for coordinating the review and approval by mission directorate point of contact.
- The headquarters mission directorate point of contact is responsible for accuracy of scientific and technical information in media products and for resolving any issues with center officials regarding the content of the product.
- The center public affairs office may work directly with the mission directorate point of contact to resolve questions and issues regarding scientific content and accuracy.
- After the content has been reviewed and approved by the mission directorate point of contact, the center draft media product will be sent to the mission directorate public affairs officer for coordinating final approval. Mission directorates, working as appropriate with their assigned public affairs officers, will formulate and manage their own internal processes for approving content and ensuring accuracy of media products. Mission directorates will interface with public affairs through their designated point of contact for each media product.

Step C2
After the draft product has been approved by the mission directorate point of contact and concurred by the headquarters public affairs officer and center public affairs officer (who represents all interested center parties) the product is forwarded to the headquarters newsroom. The newsroom reviews the draft for clarity, grammar, spelling and conformity to AP and NASA styles.

- The newsroom will confer with the assigned center and headquarters public affairs office on any questions or edits and, when necessary, will direct the responsible public affairs office to correct any media product that is judged to be unclear or contains unfamiliar terminology, acronyms, industry jargon or "NASA-speak."

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- Changes in the product made by the newsroom must be concurred by the center public affairs office (representing all interested center parties) and the headquarters mission directorate point of contact.

Step C3
The newsroom issues the final approved version of the media product at the agreed-upon date/time.

Occasional media products resulting from breaking news events may be released by a center without review by headquarters, provided the center has informed headquarters in advance of the need for rapid release and the associate administrator for communications has concurred.

Dispute Resolution
Consistent with NASA's public affairs policy, any disputes over newsworthiness, content or timing of release of a NASA media product will be resolved by the associate administrator for communications in consultation with the appropriate mission directorate associate administrator, center director and center public affairs director. Further appeals may be made to the associate administrator of communications, deputy administrator and administrator.

The mission directorate associate administrator shall be the final arbiter of disputes regarding the technical or scientific accuracy of information.

(D) Release of Information by External Institutions, Contractors, etc.

If a media product is prepared by an outside institution under contract to NASA (e.g., through a mission principal investigator or contractor responsible for a spacecraft or instrument), that institution's public affairs officer will inform NASA Headquarters or the relevant center of the pending release of the media product at least seven to 10 working days in advance of release.

Media products prepared or issued by outside institutions may focus on the activities of those institutions but may not announce activities conducted by NASA – that is the job of NASA public affairs, not outside institutions. No entity other than NASA public affairs is authorized to issue news releases or other media products on behalf of NASA without advance permission from the NASA associate administrator for communications or his/her designee.

Joint media products, such as joint news releases, must be coordinated with and approved in advance by the NASA Headquarters Office of Communications.

Note:
The process outlined here does not override any existing contractual or Space Act Agreement or obligation for which the process for release of media products is covered under a contract or Space Act Agreement with NASA. No such agreements shall be

entered into by anyone in NASA without approval of the associate administrator for communications or his/her designee.

(E) Responsibility of Headquarters Mission Directorates

Because of the volume of public information requiring coordination through headquarters, the mission directorate associate administrator or his/her designee will serve as the single point of contact for public affairs officers to coordinate and approve media products. The appropriate mission directorate associate administrator or designee will ensure all public information for release is technically and scientifically accurate. The mission directorate associate administrator shall be the final arbiter of disputes regarding the technical or scientific accuracy of information.

Writing Communications Products

NASA news releases and other communications products should tell a timely story about the agency's missions, activities or accomplishments in a simple, compelling way. They should be interesting and easily understandable to the average high school educated person.

Make a strategic assessment about what's the best way (news release, web article, social media posting, etc.) to communicate your story before developing a communications product(s). Historically, NASA primarily used releases to communicate our news. But, with NASA.gov, NASA Television and social media, a news release isn't the only, or necessarily the best, option. The goal is to use the appropriate product(s) to communicate NASA's news and information. As a rule of thumb, agency-level news releases from NASA Headquarters should be issued for major announcements, discoveries and activities. Right-size your products to reach the widest audience.

The production of communications products should involve as few people and as little time as appropriate. Avoid having "too many cooks in the kitchen."

Just because it can be abbreviated...
Do not capitalize words because abbreviations and acronyms come from them (example: do not capitalize "solid rocket booster" because of the SRB abbreviation). Only capitalize proper nouns as defined by the dictionary or AP style. (Things such as the "mobile launcher" is not a proper noun.)

Earth, Moon, Sun
Contrary to AP style, when referring to Earth's Sun and Moon, we do capitalize "Moon" and "Sun" in communications products. Also capitalize Earth (it is the proper name of a planet, like Mars). Do not say "*the* Earth" – just say "Earth." (You wouldn't say "the Mars.")

Agency, nation, department, etc.
Do not capitalize words like agency, nation, department, mission directorate or administration – even if lawyers and bureaucrats insist on it. It violates AP style.

Editorializing and Self-Congratulating
Do not editorialize or use self-congratulatory language. For example, do not characterize a spacewalk as "daring" or "dangerous." Describe things factually. If things are described well, readers easily can decide for themselves whether they are daring or dangerous.

Never, under any circumstances, insert any personal, political, ideological or religious opinions or beliefs into NASA news media products. NASA Office of Communications deals strictly with facts, not opinions, religious beliefs or ideologies.

Communications Priorities
Products should support communications priorities and reflect associated messaging. If your content doesn't directly relate to a communication priority, look for how it ties to one or more of the communications priorities at a broad level. This messaging should be mentioned up top (including headline and lead if it makes sense). Being specific helps. Explaining "here's how this thing will help us get to Mars" is more effective than simply adding "as part of Journey to Mars" to a headline.

Plain Language
Always remember the audience for communications products is the media and general public, not scientists, engineers and program managers. Media products are not scientific papers, legislative reports or legal documents. Write them in common layman's language.

Avoid agency or industry jargon or acronyms. Spell out all terms that are not part of everyday language. We are trying to educate the public about our projects and accomplishments, not our internal terminology. In addition, do not use acronyms, abbreviations or jargon just because the scientific or engineering community uses them or likes them. These communities are not your audience. Your audience is the general public, which does not talk in code.

Consider how you might explain the concept or tell the story to a friend or relative outside of the space industry that may be unfamiliar what you're describing. Use plain language to explain specific hardware parts and scientific experiments to the general population, and avoid jargon and technical language. It's never "dumbing down," it's explaining. Be sure to include the context of the bigger picture for why it matters and how it relates to NASA's larger goals (campaign messaging helps here too). In other words, answer the "so what?" question within the first couple of paragraphs.

Common Phrases
Use phrases specific to programs and communication priorities consistently across products in addition to what is in the NASA Stylebook.

Active Voice
Use active voice in all content, and avoid passive voice. Find a simple and memorable trick to check for active/passive voice in this writing tips list (#3).

Legacy References
Limit references to NASA's historical legacy, such as shuttle or Apollo, unless directly relevant in some way, and refrain from comparing capabilities of future and past missions. NASA has a rich history, but focus on forward-looking content to tell the story of capabilities we are building for the future rather than framing content in terms of the past.

Center References
Write web articles with the agency in mind. Unless for use exclusively by a center or integral to the story, center references can be integrated into quotes or included near the end of the article. Readers are most interested in the work we are doing, and a bit in who is doing it on the individual "human interest" level, but how it is managed or funded organizationally is generally secondary.

There are likely exceptions to many of these, but they should be deliberate and limited.

Yesterday, Today, Tomorrow
Do not use terms such as "yesterday" and "tomorrow" except when part of a quote. Use "today" only in media advisories for events taking place on the same day the advisory is published. In a break from AP style, to help avoid confusing the reader when referring to upcoming activities, use the day of the week and the day of the month on first reference. For activities taking place on the same day as the release is being issued, only use the day of the week without the date. Such as, "NASA announced Tuesday a new Mars mission for 2020," when the release is being issued on Tuesday. Do not use the year for dates within one year of the publication date of a news release, unless it is needed to clarify exactly when an activity will take place; use proper verb tense to avoid confusion.

Editing Communications Products

News products are edited to ensure proper and consistent accuracy, style, proper grammar and clarity. Getting releases edited accurately and quickly is the editor's top priority.

Read a news release or other communications product completely before making any edits. Initial questions often can be answered if you just keep reading.

Speed is important, but not at the expense of accuracy. Do not make edits that distort the meaning or add mistakes. If you have any doubt about the meaning, ask the writer. If you make edits that possibly could change the meaning in any way, check with the writer. It is easy to accidentally change the meaning of something when editing. Be careful and always double-check. Your job is to improve things, not make them worse. Ensure you understand what the product is saying before making edits. If you are confused, go back and ask the original writer. If the writer does not know, go back to the original source of the information.

Do not re-write the release just to make it "sound better" to you. If it is already clear, do not change it. The mark of a good editor is knowing when to leave something alone.

If the writer has inserted any political, personal, ideological or religious beliefs or opinions, take them out and immediately report the incident to the associate administrator for communications, the deputy associate administrator for communications or the director of news and media engagement at NASA Headquarters.

Do not issue (or post to the web) any news release or other communications product you have edited alone. Always send the edited release back to the writers for their review before issuing it. Always have a "second set of eyes" proofread anything you edit.

Provide the originating public affairs officer with a final version of the release for his or her review prior to issuance for proof reading and to confirm no inadvertent errors were introduced during the editing process. This provides a "heads up" and an additional check for accuracy.

Remember: You are your own worst editor.

General Editing Checklist

- Ensure all dates, times, titles, name spellings, addresses, etc., are correct and consistent with AP and NASA style. Double-check all numbers.

- Double-check spelling in headlines, as well as the names and phone numbers of contact people, web addresses and other information not in the main body of the media product. Test all external points of contact by sending an email and making a phone call with the provided information. When in doubt, ask the writer.

- Ensure verbs are active whenever possible ("He explained the process," rather than "the process was explained.") Do not insert modifiers into multiple-word verbs. Keep compound verbs together ("he also will go" instead of "he will also go").

- Get rid of acronyms, except those commonly accepted in everyday layman's language. As a general rule, use commonly understood terms such as "rocket" instead of launch vehicle, and "spacecraft" instead of vehicle.

- Ensure all scientific or engineering terminology either is put into simple terms or clearly explained. If it is not, ask the original writer or source of information to provide language that will explain it simply and clearly in a way that does not alter the meaning.

News Releases and Media Advisories

NASA news releases cover a broad range of topics and circumstances, and these guidelines should be followed closely whenever practical. NASA public affairs officers are expected to use their judgment and consult their supervisors on any significant deviations from these guidelines.

NASA News Releases
- Follow Associated Press and NASA Office of Communications style.
- Should not exceed 650 words. (Longer releases should be cleared in advance with the NASA Headquarters newsroom.)
- Should have a one-line headline that clearly states the theme of the release. (See best practice for headlines.)
- Should have "NASA" somewhere in the lead sentences.

Lead / Body of Release
The lead should be limited to 25-30 words, in most cases, and should use active verbs. Pick the most relevant point and relate it to NASA. Ensure the information in the release answers the basic questions of "who, what, when, where, why and how." (See best practices for leads.)

Example:
NASA's Kepler mission scientists have discovered a new planetary system that is home to the smallest planet yet found around a star similar to our sun.

Remaining paragraphs should be 50 to 100 words each and written in an "inverted pyramid" style (the broad base at the top represents the most newsworthy information, the narrow tip at the bottom represents the least newsworthy).

Use of Quotations
Under most circumstances, limit releases to three quotes. Limit each quote to two short sentences, or, in rare circumstances, three. Typically, the first quote should comprise the second or third paragraph of the release, and it should be the ranking NASA official's statement. Prioritize the other quotes on content and what they contribute to the release. Quotes should be written similar to a sound bite:

Example:
"Every spinoff is a tangible reminder of NASA's return on investment to the taxpayer," NASA Chief Technologist David Miller said. "Whether we're developing technology to explore space or advance the nation's aeronautics capabilities, great ideas from NASA have a way of returning real benefits back to individuals, industries and our new technology economy here on our home planet, today."

Do not include quotes that are meaningless, gratuitous or self-congratulatory, or whose sole purpose is to add someone's name to a release. Also avoid quotes not directly related to the subject matter of the release. (See best practices for quotes.)

Time Elements
Times for events in the United States should be listed based on where the activities take place, such as where a launch occurs or where a news conference is held. For launches or activities outside the United States, give the time in Eastern when it will be covered live on NASA Television, per AP television coverage guidance. If it will not be carried on NASA TV, give the time in the U.S. based on which NASA center is most responsible, followed by the local time. To be consistent with AP style and the major television networks, Eastern time should be considered the default for all events broadcast on NASA Television. The local time can be indicated as such in a parentheses. This is to benefit a nationwide audience and be closer in sync with AP Style. NASA's Ames Research Center, Silicon Valley, California, will hold a news conference at 4 p.m. EST (1 p.m. PST), which will be carried live on NASA Television.

For events "off-planet," such as activities on the International Space Station, Moon and planetary events that will be carried live on NASA TV, use Eastern time. If it will not be carried live on NASA TV, use the time where the mission control center in charge of the event is located.

Unless the product is an advisory about an event happening on the same day, use days of the week, not today, tomorrow or tonight, and the date for upcoming events within the next month.

Single Version
Do not produce separate versions of a release. Headquarters and centers will agree on a single version for the entire agency. If circumstances warrant the release of additional information locally, add the information at the bottom and leave the agreed-upon text intact. Centers are able add visual elements and/or issue HQ products to their listserv without creating a duplicate version, if coordinated with the HQ newsroom or web team.

Corrections
If NASA news releases need corrections, they should be labeled "CORRECTION -" followed by the original title. Above the headline should be a brief explanation of the correction. A full version of the correct release will follow. Corrections will be sent to all points that received the original news release as quickly as possible.

Example:
CORRECTION - Orion Flight Test Launch Date
(The Orion flight test launch date was erroneously reported. Sept. 15 is the correct date. Please use the corrected version of this news release.)
NASA Sets Launch Date for Orion
The launch of the Orion flight test is scheduled for no earlier than Sept. 15....

Do not repeat the error in the correction.

Jan. 5, 2018

RELEASE: 18-XXX (or) **MEDIA ADVISORY: M18-XXX** (or) **CONTRACT RELEASE: C18-XXX** (BOLD FACE CAPS)

NASA Issues Product Format Guidance (Upper and lowercase/Bold Face/Capitalize Each Word/Active Voice)

News releases should not exceed 650 words without prior approval. The headline and lead graph should include the word NASA, as appropriate. Shorter and punchy lead sentences are preferred.

We use AP and NASA Stylebooks for all products; default to AP style for items not addressed by the NASA Stylebook.

Products start immediately below the top margin with the date of the release. Note the date placement is flush left. Margins are one inch on all sides of the page. Paragraphs are flush left. Line spacing is single, with 0 points before and after. Use Arial 12-point normal font. Use only one space after periods.

Make sure your word software is up to date and uses generic text characters of quotation marks, etc. Before submitting your release, click the paragraph symbol in Word to reveal and remove all hidden formatting such as extra bullets at the beginning of lines, degree symbols in place of spaces, etc.

Points of contacts are at the bottom of releases after the -end-. Contacts should be limited to three people, in most cases. Do not count the public affairs contacts at the bottom of the page in the 650-word limit. List secondary POCs in the body of the release in paragraph form, if necessary. Each listed contact must have a working phone number and working email address. Double-check phones and emails of any external contacts before submitting your release to the newsroom; double-check your own for typos, as well.

If the product is an advisory for NASA TV coverage, the standard verbiage is "will air on NASA Television and the agency's website." The word "website" should hyperlink to https://www.nasa.gov/live, rather than https://www.nasa.gov/nasatv. The NASA TV URL should be used at the bottom of products when directing readers to NASA TV downlink, schedule and streaming video information.

When it is necessary to list public affairs contacts in the text of a release, write POC references in the following order and style: name, email address, phone. Do not make the phone number bold.

Note the header placement is flush left and font is bold. NASA uses "release", "media advisory" and "contract release" in the header.

The headline must reflect NASA's reason for issuing the release. It should be one line long and not the first sentence of the lead. Headlines typically don't contain time/date element or the word "to." Note the headline placement is flush left and the headline is bold, but not all caps.

Use inverted pyramid construction for all releases. Typically limit the lead paragraph to 25-30 words. The second or third paragraph must be a "nut graph" explaining why the subject of the release is important to the public. The remaining paragraphs of the release should contain details supporting the lead, nut graph and quote. Make sure every fact in the lead is supported in the quote or in the details.

The first quote should appear immediately after the nut graph, and no lower than the fourth paragraph. Limit quotes to two or three sentences each. The first quote in the release must be attributed to the highest-ranking NASA official mentioned in the release, and must provide context for the entire story. Do not include quotes that are meaningless, gratuitous, or whose sole purpose is to add someone's name to a release. No release should contain more than three or four quotes.

Use of the word "today" as a time element is permissible only in media advisories for events happening on the same day the advisory is issued. In all other instances, write time element references in the following order: time, date and place. For example, write "10 a.m. EDT Thursday, July 11, at NASA Headquarters." Use the day and date in such references to upcoming activities; do not use the year unless clarity is required. Never use the word "tomorrow."

Bullets, asterisks, hyphens or dashes are acceptable in releases.

Avoid using "Note to Editors" remarks at the end of a news release. Include the information as part of the release or issue a separate media advisory.

We do not use courtesy titles. Refer to the AP stylebook. Do not capitalize "administrator" when used in any context after name, including tabular material. (NASA Administrator Charles Bolden; Charles Bolden, NASA administrator.) Do not capitalize "agency" or "federal" unless either word is part of a proper name.

Review AP for noting academic and medical credentials. When noting academic and other institutions in releases, use the proper city and state for the location to ensure clarity. (Smith performed the research at Bowdoin College in Penobscot, Maine.) Boilerplate text, when used, should be last paragraph of the release. Boilerplates must be written in active voice, and all the information contained in them must be relevant to the topic of the release. The newsroom will exercise editorial judgment regarding the final content of any boilerplate language and its placement in the release.

Social media boilerplate language such as Twitter hashtags and Facebook URLs should be presented in paragraph form, using same style conventions applied to public affairs

POC information contained in the text of a release. Social medial boilerplate language does count toward the 650-word limit.

When appropriate, include one or more concluding URL blurbs. The first link almost always should be a NASA link. Whenever possible, the last link should be a NASA link. Links to corporate sites or other non-NASA sites are not permitted without prior approval. As a reminder, we cannot link to sites that solicit donations.

The format for Internet URLs is bold, Arial 12 point normal font. The URL must be centered and include "http." Use go.nasa.gov to shorten complex NASA URLs. For outside NASA organizations, substitute the shortened reference in place of the long one. It is permissible, when necessary, to include URLs in the text of a release instead of at the bottom. Formatting requirements are the same.

URLs do count toward the 650-word limit. Releases should not contain more than three URL blurbs without prior permission. All URLs must be working when the release is published. In the event an inactive URL is discovered in a release, the newsroom will delete the URL in order to publish as scheduled or delay publication until the link is active.

Per AP starting in 2014, state names are spelled out in the body of the release. But state names should be abbreviated in the points of contact section.

As part of the effort to blend the writing styles of news releases and web articles, the conservative use of contractions in news release is permitted, when appropriate. Historically, contractions have only been used in releases when part of a quote.
Use "-end-" at the end of releases.

Contact the NASA Headquarters newsroom if you have any questions about format.

For information about NASA and agency programs, visit:

https://www.nasa.gov

NASA Television should be written out on first reference. The general NASA TV blurb is For NASA TV downlink, schedule and streaming video information, visit:

https://www.nasa.gov/nasatv

-end-

POC / Alternate POC *(if applicable)*
Headquarters, Washington
202-358-1234 / 5678
poc@nasa.gov / altpoc@nasa.gov

Contract Award News Releases

Process for contracts under $30 million being led by NASA centers
A NASA center public affairs officer drafts a news release in coordination with his or her procurement office. The draft is sent to the appropriate headquarters directorate public affairs officer for review and approval. After approval at the headquarters directorate level, the headquarters public affairs officer provides a courtesy copy to the headquarters newsroom and headquarters Office of Legislative and Intergovernmental Affairs. The headquarters directorate public affairs officer gives approval to the center for local release. The center public affairs office then issues locally after confirming with the center procurement office that the contract award notifications and informing legislative affairs that they have notified the Hill (not always necessary, but an FYI should always be sent) have been made.

Process for contracts more than $30 million
An Administrator's Notification of Significant Contract Award (ANOSCA) is sent from the headquarters procurement office to the appropriate associate administrator. The headquarters newsroom and associate administrator for communications is copied via email on the notification being sent forward.

The headquarters newsroom forwards the ANOSCA notification email to the appropriate headquarters directorate public affairs officer, who either drafts a news release or directs the appropriate lead field center for the procurement to originate a draft. The headquarters directorate public affairs officer then clears the draft release through the directorate's associate administrator.

The headquarters newsroom edits the draft, provides a final copy to the Office of Legislative and Intergovernmental Affairs and establishes a countdown for public release. The Office of Legislative and Intergovernmental Affairs directs the timing of the release to ensure award notification has occurred to winners and congressional notifications are complete. The headquarters newsroom then issues the release after 4 p.m. Eastern time, following the close of the stock market. In some cases, contract releases will only be posted on NASA.gov's news release page and not be sent out via email. Awardee company names should not be listed in the headline.

Jan. 10, 2018

CONTRACT RELEASE: C18-002

NASA Awards Engineering, Research Support Contract

NASA has selected HX5, LLC of Fort Walton Beach, Florida, to perform engineering, research and scientific support at NASA's Glenn Research Center in Cleveland.

The Glenn Engineering and Research Support (GEARS) contract is a cost plus fixed fee/award term contract includes an indefinite-delivery/indefinite-quantity provision and has a maximum potential value of approximately $376.8 million. The performance period begins April 1 and will extend seven years, with a two-year base period, a two-year option, a one-year option and a two-year award term.

GEARS will provide engineering, research and scientific support for communications and intelligent systems, power, propulsion, materials and structures, and systems engineering and architecture. Work under the contract includes facilities engineering, test engineering, manufacturing engineering, project management, and data management and scheduling support. HX5 also will support fundamental research on space or gravity-dependent combustion and fluid systems.

For information about NASA and other agency programs, visit:

https://www.nasa.gov

-end-

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Web Articles

The guidelines for writing communications products apply to web content, as to everything else. However, there are a few special twists for web articles.

- Readers scan before deciding to read. Include in the headlines and subheads words that are likely to pull the reader in: Mars, space travel, supersonic flight, etc. Less successful: study, consider, partnership, addresses, hails, meets, facilities, long-term.
- Use multiple compelling and relevant graphics and videos to help tell the story. Describe, in the caption, what the user is seeing clearly and relate it to the story.
- Unless the article is a historical profile, portraits and group photos don't generally add to the story because readers aren't as interested in the "who" as the "what", "how" and "why".

Keep in mind…

The mean duration of an individual session on NASA.gov is a little more than two minutes, and the median duration is 10 seconds or less.

Various studies[1] report the average K-12 student reads 200 words per minute (wpm) and the average adult reads 300 wpm.

Headlines

Please see the Headlines section under Best Practices.

Context

As good as we are at telling a discrete story, we sometimes struggle to provide a 'big picture.' The web offers an ideal medium to add context by linking to relevant materials. A story on a development milestone for a particular mission can link back to an explainer on the mission's goals, or to a historical piece on an earlier related mission.

We also can provide context through a standard explanation of something used in all relevant stories. Any story on project X should include boilerplate on what project X is doing and how it relates to NASA's overall mission.

When writing a historical piece, always help the reader out by relating the historical story to programs still ongoing at NASA.

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[1] Carver, Ronald P. "Silent Reading Rates in Grade Equivalents." *Journal of Reading Behavior*, XXI, No. 2, 1989, pp. 155–166. *Sage Publishing*, journals.sagepub.com/doi/pdf/10.1080/10862968909547667.

If a new article is updating something previously published, include a link back to the original story. If warranted, place an editor's note at the top of the earlier article along these lines:

> **Editor's note: An update to this story, [title with link], was published on [date].**

Conversely, the update itself should link back to the original story. An editor's note like:

> **Editor's note: This story updates [title with link], published on [date].**

Be very careful about revising old stories, even if recent developments have made them factually incorrect. Such editing could leave NASA open to accusations of trying to rewrite the historical record. It's much better for NASA and the user to leave older stories online as they were published with appropriate editor's notes and links than to leave the user wondering about NASA's integrity.

Similarly, never revise a news release issued by NASA Headquarters. They are official records, paper copies of which are shipped to the National Archives. If you believe something should be changed in a press release, contact the NASA Headquarters newsroom, 202-358-1600.

Search Engine Optimization

Obviously for people to read your content, they have to find it. The largest share of visitors get to https://www.nasa.gov via Google or other search engines. Make sure your page title and headline (the same thing in Drupal, unless you change one) use terms people are likely to use to search for your content.

Sample Web Article

Earth-Size Planets: The Newest, Weirdest Generation

A bumper crop of Earth-size planets huddled around an ultra-cool, red dwarf star could be little more than chunks of rock blasted by radiation, or cloud-covered worlds as broiling hot as Venus.

Or they could harbor exotic lifeforms, thriving under skies of ruddy twilight.

Scientists are pondering the possibilities after this week's announcement: the discovery of seven worlds orbiting a small, cool star some 40 light-years away, all of them in the ballpark of our home planet in terms of their heft (mass) and size (diameter). Three of the planets reside in the "habitable zone" around their star, TRAPPIST-1, where calculations suggest that conditions might be right for liquid water to exist on their surfaces—though follow-up observations are needed to be sure.

All seven are early ambassadors of a new generation of planet-hunting targets.

Red dwarf stars – also called "M-dwarfs" – outnumber others, including yellow stars like our sun, by a factor of three to one, comprising nearly 75 percent of the stars in our galaxy. They also last far longer. And their planets are proportionally larger compared to the small stars they orbit. That means small, rocky worlds orbiting the nearest red dwarfs will be primary targets for new, powerful telescopes coming online in the years ahead, both in space and on the ground.

"The majority of stars are M-dwarfs, which are faint and small and not very luminous," said Martin Still, program scientist at NASA headquarters in Washington. "So the majority of places where you would look for planets are around these cool, small stars. We are interested in the nearest stars, and the nearest stars are mostly M-dwarfs."

But these are sure to be perplexing planets, with strange properties that must be teased out by careful observation as well as computer simulations. Finding out whether they can support some form of life, and what kind, likely will keep astrobiologists working overtime, perhaps attempting to recreate in the laboratory some of the conditions on these red-tinged worlds.

"We're definitely all working overtime now," said Nancy Kiang, an astrobiologist at NASA's Goddard Institute for Space Studies in New York City.

Would life find a way?

Expert opinion on whether red dwarf planets are suitable for life tends to tick back and forth, "like a pendulum," said Shawn Domagal-Goldman, a research space scientist at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

"We've come up with these theoretical reasons why such a planet might struggle to be habitable," he said. "Then we look at those theoretical concerns with a little bit more detail, and find out it's not that big of a concern. Then some other theoretical concern crops up."

At the moment, the pendulum is ticking back toward lifelessness. Recent findings suggest life would have an uphill battle on a planet close to a red dwarf, largely because such stars are extremely active in their early years – shooting off potentially lethal flares and bursts of radiation.

These youthful tantrums would go on for quite some time. Red dwarfs smolder at much lower energy than our sun, but live much longer, perhaps with lifespans in the trillions of years – longer than the present age of the universe. Our sun is expected to burn out after shining for something on the order of 10 billion years; we're about halfway through its lifespan.

The exact age of the TRAPPIST-1 star is unknown, but scientists believe it is at least 500 million years old, or about one-tenth the age of our 4.5-billion-year-old sun.

Some are born to endless night

Red dwarfs could take their first billion years just to calm down enough to allow any nearby planets to be habitable. And the "habitable zone" around such stars is very close indeed. All seven of the Earth-size planets crowd so close to their star that they complete a single orbit – their "year" – in a matter of days, 1.5 days for the nearest planet and 20 days for the farthest.

That kind of proximity means the planets are probably tidally locked, with one face always turned to the star, the same way our moon presents only one face to Earth. And while red dwarfs are "cool" compared to our sun, they would loom large in the sky of a close, tidally locked planet, perhaps baking the sunward face. The far side, meanwhile, could be trapped in an eternal, frozen night.

The right kind of atmosphere could mitigate such effects, transporting heat to the planet's far side and helping to moderate the climate overall.

A recent study that relied on computer simulations of red dwarf planets, however, delivered more grim news. The flaring tempers of young red dwarfs, with their bursts of high-energy X-rays and ultraviolet emissions, could actually strip oxygen from the atmospheres of nearby planets, according to the study by a team at NASA Goddard led by Vladimir Airapetian.

Other scenarios involve stripping away the atmosphere altogether.

Yet another potentially sterilizing effect, even for M-dwarf planets that manage to hold on to their atmospheres, would result from high-energy radiation triggering a runaway greenhouse effect, Domagal-Goldman said.

"Maybe you would end up in a stable climate that's too hot to support life," he said.

But so little is known about how life gets its start, and how common or rare it might be in the cosmos, that tenacious life on M-dwarf planets remains a distinct possibility.

Although loss of atmosphere from early stellar flaring is a legitimate concern, it is based on complex computer modeling, said Franck Selsis of the University of Bordeaux, one of the authors of the TRAPPIST-1 paper.

Since computer models contain certain assumptions about stars and planets, they may not be complete, Selsis wrote in an e-mail. Models might fail to account for effects from the star on planetary atmospheres that could create a protective magnetic field. Or they might produce atmospheric loss rates so high they are physically implausible.

As for TRAPPIST-1, "The current relative quietness of the star and plausible sources of atmospheric replenishment still make possible for the planets to have atmospheres and surface habitable conditions," said Michaël Gillon, principal investigator of TRAPPIST at the University of Liège, Belgium. "Our only way to go beyond these theoretical speculations is to try detecting and studying thoroughly their atmospheres."

Maybe life 'can just deal'

Other scientists also offered possible scenarios on the optimistic side of the M-dwarf habitability equation.

"Maybe the atmosphere can recover, and it's just fine," said Tom Barclay, a senior research scientist at the NASA Ames Research Center in Moffett Field, California. Barclay worked on the most prolific planet-finder, NASA's Kepler space telescope, during both its original mission and its second incarnation, known as K2.

In Barclay's scenario, lifeforms find a way to adapt to bursts of stellar radiation.

"You have regular events, but life is used to this," Barclay said. "It just deals with it. We certainly see life on Earth capable of hibernating for very extended periods of time. We see that life goes into a state where it shuts down, sometimes for years or decades. So I think we shouldn't, probably, rule it out, but we should put a lot of effort into studying whether this is a place where we think life could thrive."

Future telescopes, including NASA's James Webb Space Telescope (JWST), to be launched in 2018, could help resolve such questions by closely analyzing the atmospheric gases of the TRAPPIST-1 planets. If one of these instruments were to

discover water vapor and, say, a combination of oxygen and methane, it could be a strong indication of a potential life-bearing world.

The Hubble Space Telescope also will be a key player in characterizing the atmospheres of the TRAPPIST-1 planets and has, in fact, already begun a preliminary survey. Both space telescopes are equipped to capture the spectrum of light from the planets, revealing the types of gases that are present.

"We will look at atmospheres effectively in different wavelengths, allowing us to get the composition, temperature, pressure," said Julien de Wit, a postdoctoral researcher at the Massachusetts Institute of Technology, Cambridge, and an author of the new TRAPPIST-1 paper. "This will allow us to constrain habitability."

Besides, stellar flaring might not be all bad – that is, if M-dwarf planets have a bit of well-timed luck.

"They might start out with dense hydrogen envelopes that get blasted off," said Victoria Meadows of the University of Washington, the principal investigator for the NASA Astrobiology Institute's Virtual Planetary Laboratory. "So it's kind of like a protective skin on the planet."

The stellar radiation would remove the hydrogen, leaving a potentially habitable world behind.

The planets also might form farther away from the star, moving closer over time.

"They could migrate in from outside, further out in the planetary system, where there is more water, cooler temperatures," she said. "That would give them more protection against water loss. There are a whole bunch of options."

Modeling shows, in fact, that densely packed M-dwarf planetary systems -- similar to the TRAPPIST-1 system – are more likely to form farther away, then migrate inward, because the inner solar system would lack enough material to form so many planets.

In any case, if such planets possess life at all, simple lifeforms appear to be more likely.

"I'm just talking about slime here," Meadows said. "It's far easier to evolve than sentient beings. The majority of life we find out there is likely to be single cell, relatively primitive life. That's the sort of thing we'd be looking for on planets orbiting these M-dwarfs."

This web article is online at: https://www.nasa.gov/feature/jpl/earth-size-planets-the-newest-weirdest-generation

Other Good Examples

- Gemini IX Crew Found 'Angry Alligator' in Earth Orbit
  https://www.nasa.gov/feature/gemini-ix-crew-found-angry-alligator-in-earth-orbit

- Solar System's First Interstellar Visitor Dazzles Scientists
  https://www.nasa.gov/article/solar-system-s-first-interstellar-visitor-dazzles-scientists

- Five Tips from NASA for Photographing the Total Solar Eclipse on Aug. 21
  https://www.nasa.gov/article/goddard/2017/five-tips-from-nasa-for-photographing-the-total-solar-eclipse-on-aug-21

Image Captions

Style

Captions should be written following the same guidelines as all NASA media products, including AP style and the NASA Stylebook.

The first sentence of a photo caption should include:

1. **Who** – List the titles and names of people in an image in order from left to right. e.g. "title name, left, title name, center, and title name." In this example, no need to say "right" for last, it is assumed or you may skip "center" and just use "right" for last. Or if larger group: "title name, left, title name, title name, title name, and title name, right."

   Example –

   Expedition 53 flight engineer Joe Acaba of NASA, left, Soyuz Commander Alexander Misurkin of Roscosmos, center, and Mark Vande Hei of NASA pose for a photograph ahead of their launch on a Soyuz rocket, Tuesday, Sept. 12, 2017, Building 254, Baikonur Cosmodrome, Kazakhstan. Acaba, Misurkin, and Vande Hei will spend approximately five and half months on the International Space Station.

2. **Who** – Ages should be given for children.

   Example –

   Twelve-year-old Alex Frye checks his special viewing glasses prior to viewing the partial solar eclipse from a highway overpass in Arlington, Virginia, Thursday, Oct. 23, 2014.

3. **What** – Briefly explain what's happening in the image, in the present tense.

4. **Where** – Location where it was taken, following AP style for the city and state as appropriate.

5. **When** – First sentence should include the date, including the day of the week – e.g., Tuesday, Jan. 29, 2008. Put a comma after the year if the date doesn't come at the end of the sentence. Time should be given as local and with reference to U.S. time zone releasing. Same is true for planetary missions – they should have reference to local/U.S. time.

Example –

U.S. Vice President Mike Pence, right, is shown the Mars 2020 spacecraft descent stage from inside the Spacecraft Assembly Facility by JPL Director Michael Watkins, left, and NASA Mars Exploration Manager Li Fuk at NASA's Jet Propulsion Laboratory, Saturday, April 28, 2018 in Pasadena, California.

Example where time is given, but not in first sentence –

On a part of Vera Rubin Ridge, where rover-team researchers sought to determine whether dust coatings are hiding rocks' hematite content, the Mast Camera on NASA's Curiosity Mars rover took this image of a rock surface that had been brushed with the rover's Dust Removal Tool. The image was taken on Sept. 17, 2017, during the 1,819th Martian day, or sol, of Curiosity's work on Mars.

If a caption is longer than one concise sentence, the second sentence of the caption should give context to the news event or describe why the photo is significant. Whenever possible, keep captions to no more than two sentences, while including the relevant information.

Illustrations
Captions for illustrations should explain what is depicted in the image and the significance of the image.

Credits/Byline
The format for image credits is: Organization/Photographer (or Illustrator)

✅ NASA/Mark Sowa

❌ NASA/JSC/Mark Sowa

If the name of the photographer or illustrator is not available, use just the organization name.

Hyperlinks and URLs

A **URL** (Uniform Resource Locator) is an address that specifies the location of a resource on the internet (example: https://www.nasa.gov), whereas a **hyperlink**, or link, is a word or words (called anchor text) within content that links to other related web content (example: hyperlink to NASA website).

HYPERLINK

Jan. 29, 2018

Hyperlink (appears when hovering cursor over anchor text)

MEDIA ADVISORY: M18-020

Anchor Text

NASA Television to A https://www.nasa.gov/feature/ super-blue-blood-moon-coming-jan-31 **Rare Lunar Eclipse**

Ctrl+Click to follow link

Sky-gazers are in for a when three celestial events combine to create a super blue blood moon NASA Television and the agency's website will provide live coverage of the celestial spectacle beginning at 5:30 a.m. EST.

vs. URL

Join the conversation on Twitter at:

https://twitter.com/NASAMoon

-end-

- Put the call to action up high in the document. In the first image above, the call to action is to encourage readers to watch NASA's coverage and links (anchor text is "website") to the viewing location online (hyperlink is https://www.nasa.gov/live).
- When selecting anchor text, choose text that contains a keyword (or keywords) that is relevant to the linked content. Anchor text should not include more than three words, unless it is a proper name.
- Taking the entire product into consideration, determine what the overarching topic is. Then, provide a URL at the bottom of the product for more information on that topic. For example, if the product is an advisory for television coverage of a spacewalk at the International Space Station –

For more information on the International Space Station, go to:

https://www.nasa.gov/station

- When deciding where to add hyperlinks in your product, read it from the viewpoint of a layperson to identify areas where a reader may want more information.
- Be judicious with links. Too many will not only overwhelm your readers, but can actually harm search engine optimization (SEO). Link spamming is considered a deceptive SEO practice and can result in a site, or a news release, being penalized by search engines and bumped off a results page.
    - Hyperlinks – the average media product should have three to six.
    - URLs – the average media product should have one to three URLs at the bottom.

Past practice for NASA media products has been to remove the hyperlinks from URLs – meaning you cannot access the linked content by clicking on the URL. This is no longer required.

NASA Television Video Files

Package Content
All slates should be no more than one page.

Main Slate
(20seconds) – Use Arial font (20 point) and headquarters-provided background. (Fig.1)
1) Slug (matches news release)
2) One-to-two sentence description of item. Includes who, what, when, where, why.
3) Total running time (TRT)
4) Edited b-roll (Actual RT)
5) Interview(s) (Actual RT)
6) Additional b-roll (Actual RT)
7) Super
8) NASA
9) Center contact information
10) Headquarters contact information
11) NASA web address and links, i.e. "For more info, www.nasa.gov/shuttle"
(2 seconds black)

Edited B-roll Slate
(20 seconds) – Use Arial font (20 point) and headquarters-provided background. (Fig. 2)
1) Slug (matches news release) - edited b-roll
2) Run time (Actual RT)
3) Super
4) NASA
5) Center contact information
6) Headquarters contact information
7) NASA web address and links, i.e. "For more info, www.nasa.gov/station"
(2 seconds black)

Edited B-roll
(20seconds) – This should be your best available video, your "money shots," edited together for easy use by a television news editor or producer for a 20-30 second voiceover. If applicable or possible, provide a variety of shots (wides, mediums, close-ups) to tell your story.
(2 seconds black)

Interview(s) Slate
(10 seconds) – Use Arial font (20 point) and headquarters-provided background. (Fig. 3)
- Slug (matches news release) - Interview(s)
- Interviews run time
- Name/Title/RT Interview 1
- Name/Title/RT Interview 2
- Name/Title/RT Interview 3

- Super
- NASA
- Center contact information
- Headquarters contact information
- NASA web address and links, i.e. "For more info, www.nasa.gov/mro"

(2 seconds black)

Interview(s)

(Maximum three, each no longer than 25 seconds) – Each interview "bite" (separated by one second of black) should be concise and to the point, compelling enough so a non-technical news producer would consider plugging it into his or her news show. It does not have to be long, just memorable. Short and to the point. Think of it as an exclamation point at the end of a sentence. (Avoid a lot of background information. That is for the video file web page.) It can sum up the importance of your story and why the public should care. If possible, get your interviewee to use a simile to illustrate the importance of the project (e.g., This telescope is kind of like a giant knife, cutting the galaxy like you would a loaf of bread. The fun is analyzing each of the slices!).
(2 seconds black)

Expanded/Additional B-roll Slate

(20 seconds) - Use Arial font (20 point) and headquarters-provided background. (Fig. 4)

1) Slug (matches news release) - expanded/additional b-roll
2) Run time
3) Super
4) NASA
5) Center contact information
6) Headquarters contact information
7) NASA web address and links, i.e. "For more info, "www.nasa.gov/rovers"

(2 seconds black)

Expanded/Additional B-roll

(3 minutes) – This is to accommodate producers, reporters, and editors working "long form" news packages. The 40 seconds of edited b-roll were your very best highlights; here, your shots can "breathe," go longer and deeper into your subject.
(5 seconds black)

Best Practices

NASA's Office of Communications has made great strides in identifying best practices for communications products through metrics and analysis collected and performed internally and by service providers, such as PR Newswire.

In 2017, we focused on improving three high-impact elements of NASA's communications products – headlines, leads and quotes. In 2018, we are adding hyperlinks and URLs to this effort. The following are the collected best practices in these areas that, if followed, are likely to have considerable and immediate impact on the reach and reception of our work.

Headlines
- Make them short, searchable and shareable. Anything beyond 60 characters may be invisible to search engines.
- Include the most critical keywords.
- Give enough information to let readers know what it's about, but leave them wanting more. Too much detail doesn't leave a reason to click. Shoot for somewhere in the middle.
- Too cute or creative may not tell readers what project/program/mission it's about.
- Not every headline needs "NASA" in it. Most, but not all. If it doesn't, then NASA should be somewhere in the lead paragraph.

Leads
- Straightforward, factual leads work well for major news developments – e.g., NASA's Curiosity rover has found water on Mars.
- Avoid technical/industry jargon and "NASA-speak."
- For web articles, a "just-the-facts" lead doesn't give the reader a reason to keep going. Look for creative, indirect ways to set the scene, paint a picture or otherwise "back into" the story. This is also an opportunity to hit the "so what" more immediately before getting into the specifics. Articles on incremental processing milestones especially benefit from this, because you can start by pointing out what the thing will do or how it fits into the broader goal, and then move on to the specifics of what part arrived where, etc.

Quotes
- Use quotes to add additional details and positive opinions about an event, person or object to make a strong point.
- Good quotes emphasize the significance of the activity in plain language.
- Avoid simply setting up or repeating the content that precedes or follows the quote. Try having a casual conversation about the topic with the person quoted to get a quote that sounds like real speech, or try speaking it aloud as you write it to test if it sounds like something you (or anyone) would ever say. Most readers can easily spot a quote that doesn't reflect how people actually talk.

Social Media Guidance & Terminology

NASA's Office of Communications does not have a specific social media policy. We take the view social media is a medium (like the web, email, TV, etc.) where the message and content are what matter.

Instead, we apply existing rules, guidelines and policies employees already are familiar with, such as:
- NASA Policy on the Release of Information to News and Information Media
- NPD 2540.1, Personal Use of Government Office Equipment Including Information Technology
- NPR 2810.1, Security of Information Technology
- Chapter 11, Section 3.9, Internet Publishing Content Requirements
- NPD 2810.1, NASA Information Security Policy
- NPR 1600.1, NASA Security Program Procedural Documents, Section 5.24 Sensitive But Unclassified (SBU) Controlled Information
- NM 1382-42, NASA Principles and Policies on Scientific Openness

NASA's Office of the Chief Information Officer has issued social media guidelines to help employees who are using social media.

Guidelines for Use

NASA has been on the forefront within the federal government in utilizing social media and Web 2.0 technologies. We've embraced the use of these technologies to enhance communication, collaboration, and information exchange in support of the agency's mission. By openly sharing knowledge, best practices, and lessons learned, we can provide more effective solutions and efficiencies to enhance mission excellence.

As such, this website provides NASA guidance on the use of social media technologies, including, but not limited to, photo and video sharing, wikis, blogs, podcasts, mash-ups, web feeds, social networking sites (e.g., Facebook, LinkedIn), microblogging (e.g., Twitter), and other web-based forums. Use of social media technologies in an official capacity is covered by existing NASA regulations and policies on information accessibility, records management, privacy, security, information quality, and release of information to news and information media.

NASA employees and contractors are reminded that they remain accountable for responsible, safe and judicious use of these technologies, whether in an official or personal capacity. When using social media technologies to discuss NASA and its activities in their personal capacities, NASA employees shall clearly identify personal communications and personal opinion (versus agency) and include a disclaimer such as "The statements and opinions posted by me are my own and do not necessarily

represent NASA's positions, strategies or opinions." Also, NASA employees and contractors should not use NASA identifiers, including the NASA Insignia ("meatball"), mission patches, or program identifiers in connection with any personal communications or non-official representation. Finally, NASA managers and supervisors have the discretion to restrict personal use of social media technologies by employees during duty hours.

- Know and follow NASA rules and regulations as stated in the policies above.
- Act responsibly – Think before posting. Even if a comment can be removed from a site, once it is posted it can be preserved by others and reposted.
- Unless you are officially representing NASA as a spokesperson (Official Use), do not represent yourself as speaking for NASA.
- Be yourself Use the first person and speak for yourself, not for NASA.
- Identify yourself – State your name and role when you discuss your work.
- Write what you know – Stick to sharing facts and opinions about your areas of expertise.
- You are personally responsible for the content you publish on blogs, wikis or any other form of user-generated media.
- Be honest and transparent – Truth and sarcasm look the same on paper. The best way to make sure that you convey a truthful message is to be true.
- Be professional and respectful at all times.
- Contribute, engage, get involved – The unique value of social media is to interact with others by commenting, replying, giving feedback and letting your voice be heard. Without it, you're just broadcasting.
- Maintain and update content to ensure accurate and timely information.
- Correct and acknowledge mistakes – You might know that something you stated was not quite right, and have corrected yourself. But do others?
- Obey copyright, fair use and financial disclosure laws.
- Be prepared to spend time providing answers and responses to questions posed by the public. If the questions wander outside the bounds of your expertise, politely decline and/or refer them to the Public Inquiries group in the Office of Communications at hq-public-inquiries@nasa.gov.
- Any online communication regarding NASA financial data is strictly forbidden except via official NASA processes.
- Information such as NASA's or a contractor's intellectual property, trade secrets, ITAR, Sensitive But Unclassified and customer data are strictly forbidden from any online discourse except by authorized personnel in accordance with the specific NASA external communications process.
- Do not use a public social media service for a NASA-related activity or discussion that is not meant for total public access. If the topic is not for release to the public, use an internal social media tool.

- For reasons of liability, do not participate in any type of personal recommendation of another individual related to employment considerations. Follow NASA policy and refer all communication of this type to Human Resources for verification.
- Do not provide any type of endorsement of a product or company for reasons of liability. Follow NASA policy and refer all communication of this type to the Office of General Counsel for verification.
- Violation of NASA policy may result in disciplinary action, up to and including termination or other intervention.
- Don't blog proprietary or privileged information. Don't assume you can "tweet" or blog the meeting you just attended. Ask the meeting leader.
- Don't cite or reference clients, partners or suppliers without their approval. When you do make a reference, link back to the source where possible.
- Don't use social media to release NASA "news." News can be any previously "unreleased information with the potential to generate significant media, or public interest or inquiry." Only official spokespeople are authorized to speak for NASA in an official capacity regarding NASA policy, programmatic, and budget issues. When in doubt, ask a public affairs officer.
- Don't forget your day job. You should make sure that your online activities do not interfere with your job commitments. Your manager does have the right to limit the use of social media at work.

For additional information and guidance, contact your center's social media lead or the agency's social media leadership found at
https://www.nasa.gov/connect/social_media_contacts.html.

Obtaining an Official Account

Official social media accounts are recognized and registered accounts with the Office of Communications, the Office of the CIO, and the Office of the General Counsel. They are followed or liked by the @NASA Twitter account, the NASA Facebook page, and the +NASA Google+ Page, among others.

Officially recognized accounts are offered the following:
1) Use of the NASA logo or name
2) Use of the word "official"
3) Ability to get a verified account, if available and at the discretion of the third-party platform
4) Listing on the NASA.gov Connect page
5) Be followed or liked by the NASA flagship accounts
6) Having advertising and other limits removed on accounts, depending on the platform
7) Insurance that the NASA Social Media team won't mistakenly report your account for a terms of service violation as impersonating NASA

To request and register a new official social media account at NASA, please visit this site to begin the process: http://communications.nasa.gov/socialmedia/request-account

Style Guidelines

Other Accounts/Sources
- Try to reference another account, when appropriate and available, in any message we share.
- When possible, reference the account mid-message as opposed to the end.

Dates and Times
- Avoid describing dates in relative terms such as today, tomorrow, next quarter, next year or soon unless describing a participatory event that the public can watch, take part in or participate. Use absolute dates instead on all mission updates or other news.
- For times on Twitter, use am and pm styled as lowercase, no periods and no space between the number and time of day. (e.g., 3pm EST, 10am CST). On platforms where length is not an issue, use a space and periods. (e.g., 3 p.m. EST, 10 a.m. CDT).
- Specify time zones when writing about an event or something else people would need to schedule.
- For US-based time zones, abbreviate to two letters with no periods for brevity's sake on Twitter (e.g., EST, CST, MST, PST). On platforms that allow more space, use the full three letter abbreviation (e.g., EST, EDT, etc).
- When space allows, include UTC time to allow easier conversion of times. Do not use GMT, as it is not a NASA standard.
- Avoid showing times at a 24 hour clock when possible.
- Use a dash between times (e.g., 2pm-4pm EST). Only include the time zone once at the end.
- For days of the week, abbreviate using AP style abbreviations in all instances at just three letters and no periods. (e.g., Mon, Tue, Wed, Thu, Fri, Sat, Sun)
- When space does not allow a day of the week, reference the month and date as using AP style abbreviations with no periods or for those months shorter than 5 letters, spell out. (e.g., Jan 1, Feb 3, Aug 19, Sept 3, Oct 24, Nov 16, Dec 28)
- Avoid using number only dates than can be misinterpreted in different parts of the world (e.g., 5/9).

Temperatures
- Use the degree symbol and the capital F abbreviation for Fahrenheit on all posts. (e.g., 98°F)
- Add a second temperature in Celsius, if room allows. (e.g., 23°C)

Credits
- Use "Credit: NASA/entity" whenever possible.
- For brevity on Twitter, you might decide to use "h/t @username" (with "h/t" meaning "hat tip"), "via @username" or simply mention that user name at some point in the Tweet.
- On Instagram, an alternate method would be to use the camera emoji ("📷: @username") to give credit to the appropriate person.

Emojis
- Emojis are a fun way to add humor and visual interest to your writing, but use them infrequently and deliberately.

Punctuation
- Use a colon and a space before a link.
- An exclamation point or question mark (followed by a single space) can also introduce a link:
- Use a single exclamation point to signal excitement.
- In VERY RARE instances (major celebrity appearances, top awards, international recognition, etc.) multiple exclamation points may be used (but think judiciously about whether the situation warrants more than one).
- Use an ellipsis (three periods, no spaces) to show where something has been omitted (as in a quote that's been shortened) OR (in rare instances) to signal suspense.
- Em dashes can be used to set off various parts of a sentence.
  - How To: To make an em dash (–) on a Mac, hold down SHIFT+OPTION+hyphen. NEVER use a hyphen (-) instead of an em dash. No spaces before or after the em dash.
- Ampersands (&) should only be used in running text of a post when needed for brevity.
- Serial commas (also known as the Oxford comma) should not be used. There is no comma before the conjunction in a list of three or more items. Our lists are formatted as a, b, c, d and e (not a, b, c, d, and e).
- Percentage (%) symbols should be used in all instances on social media posts.

Voice/Tone
- Use first- and second-person language ("we" and "you") and contractions when appropriate. You are speaking as NASA when you post to an official account.
- Use strong, vivid, purposeful language, including active verbs. Look for verbs tied to physical action, for example: lift, build, spearhead, capture, drive and hone. Look for verbs and adjectives that include some emotional connotation or evoke a strong mental image.
- Use words that are clear and straightforward, without jargon or wordiness. The most concise method of stating something is often the most powerful.
  - (ie: Instead of "we are accomplishing improvement outcomes," use "we are improving." Instead of "Fees and payments shall not be accepted from payers or debtors prior to 10," use "We won't accept payments before 10.")
- Use active voice instead of passive.
  - (ie: "We provide employees," instead of "employees are provided with.")
- Avoid cliché and vagueness, instead finding fresh language and metaphors.
  - (ie: the phrase "Our cutting-edge program is pushing the envelope and thinking outside the box," is built on phrases that have been overused to the point where they are flat and meaningless. Instead, bring in specific factual detail that demonstrates your point, like "Our program, the first in

the world to use X technology, urges employee to find new applications for everyday tools." Alternately, you can look for creative new language to articulate the idea. "Our program investigates hardware that's years ahead of the market and encourages employees to see their world through the lens of new technology.")

- Engage the audience in conversation. Feel comfortable asking your audience questions. And always welcome questions and feedback from the audience.
- Be helpful, thoughtful and optimistic

Best Practices

Before you hit the publish/post button or send an update, think about what you want to post. To do right by your audience, to deliver the utmost value and receive the maximum engagement, there are a handful of qualifications that every social media post should meet.

Did you make the most of your post text?
We've found that the most valuable content on social media—the content that gets the most interactions, engagement, and virality – is either educational or entertaining. Consider these questions to figure out if it is either:
- Is your content interesting enough that users want to share it and post about it?
- Will anyone really care about this content besides you or an internal stakeholder?
- If you were to see this post in your social media timeline, would you pause to read or reshare?
- Does your post add value for the reader?

In many ways, you need to speak the language of your followers, and not your internal stakeholders. Consider your audience when drafting posts by asking yourself:
- Will you be okay with absolutely anyone seeing this? Does it need to even be a social media post? Is this the best way to get this message in front of the audience it is intended for?
- Is this post too vague? Will everyone understand what I'm saying?
- Is this post too technical? Will the only people who understand it have a Ph.D. in the field?
- Am I using acronyms, abbreviations or insider jargon in this post?

Always assume readers don't know anything about NASA, as even if someone is following your account, it could be shared with someone who doesn't. So, for example: don't just assume that "SLS" is known. Write it such that it's "SLS, our new and powerful rocket".

Consider how your social media post will look in someone's feed independent of it appearing on our account.
- Does the post stand-alone? Is it self-explanatory?
- Are followers able to walk away having learned enough to understand the topic?

- Is it actionable for those wanting to dive deeper into a topic? Does it have a link for more information?

Avoid making common mistakes in your social media posts.
- Is everything spelled correctly? Does the post have proper grammar?
- Is the link *accurate*? Does it click through to where you intended?
- Is the link *appropriate* for the message of your social media post? Is it to a too-generic page, rather than the specific subject matter of your post?
- Is your hashtag usage appropriate? Will your use of a hashtag make your post part of a bigger conversation? Is your hashtag only used by you as a branding element?

Another way to look at this: Can anything be added or removed to make the message stronger to your audience?

Did you make the most of visual content (e.g., images, video and slides)?
Video is now the king of social media. Twitter, Tumblr, Facebook, YouTube, and Instagram all support native uploading/on-demand video directly and many amplify native video over embedded links to videos on other platforms. Video posts are now outperforming images 3 to 1 when averaged across many of our channels, especially on Facebook, where the algorithms give it priority in peoples' feeds.
- Think Mobile. These days, more social media posts are viewed on the three-inch screen than on a computer. How will this look on a 3 inch screen?
- Think Short and Tight: Videos with higher numbers of views are rather short. Attention Spans are short. Will people start watching and tune out before I tell them what I want them to know?
- Think Muted: More than two-thirds of video watched on social media never has the sound turned on. Is the video at least closed captioned to be 508 compliant? Is all the information being talked about on audio also available visually?
- Think About the Start: Video starts automatically playing in peoples timelines on Facebook & Twitter. The first 10 seconds are the most critical of a video and should be extremely visually compelling – not bumpers, logos, talking heads. If scrolling through a feed with material from lots of accounts, what would make you stop & watch?
- Think Inside the Box: Are all of your titles and captions going to be readable on a small screen? On Instagram, will it all fit inside of a square?

Images are the second most important factor in optimal social media content. If you can't get a video element, consider including a visually-compelling image. Will the image work on its own without needing to add branding, text, or other elements to it? Shareables with branding and text overlays on them are now among the least shared content across NASA. Shareables as ads for events with calls-to-action still have purpose, but shareables for non-call-to-action materials are no longer working.

If there's a way to work in visuals, it's likely to increase the success of your message.

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Are you ready to post?
Sometimes, it's good to pause and reflect on a post. Is the post a knee-jerk reaction to something? If it's real-time, did I take a moment to pause and re-read (or, better yet, have someone else read it) before publishing?

It's easy to think that your thing is the most important thing in the world. Maybe it is the newsmaker of the day and everyone on the internet is talking about it. But, more often than not, it isn't. Right-size your posts so you don't wind up spamming your followers or appear tone deaf to the larger world around you. And if you don't have content, don't feel compelled to just make stuff up. Post when you have news. Your followers will continue to follow you through quieter periods.

Conclusion
Working from these tips can be a helpful way to ensure the utmost quality for each post that goes out.

When posting, consider some of the following:
- Is the message valuable for my audience?
- Is everything correct – e.g., voice, URL, spelling and length?
- How many times have I posted already today?
- Did I make the most of visuals to help tell the story?
- How reactionary is this message? Would I be okay with absolutely anyone seeing it?
- Is my post clear, concise and understandable to a sixth grader, as well as a 65 year old?

If you have any questions about best practices on social media, please consult all of the documentation at http://communications.nasa.gov/socialmedia or email the social media team at hq-socialmedia@lists.nasa.gov.

Parts of this are adopted from a Buffer blog post authored by Kevan Lee.

Terminology

360 Video/360 Image
360-degree videos and images, are assets where a view in every direction is recorded at the same time. During playback the viewer has control of the viewing direction like a panorama.

AddThis
AddThis is a social bookmarking service that provides a code users can put on their websites so that when people visit that site, they have the option to share via Facebook, Twitter, etc. Its analytics service can show you which pages are trending, where people are interacting with your brand, and what they're saying about your content on Twitter.

avatar
A small thumbnail image used as an icon to virtually represent the user on their account

Bit.ly
Bit.ly is a free URL shortening service that provides statistics for the links users share online. Bit.ly is popularly used to condense long URLs to make them easier to share on social networks such as Twitter. go.nasa.gov is "Powered by Bit.ly."

blogosphere
the larger blogging community made up of many different bloggers across different platforms and blogging services

bookmarking
Bookmarking online follows the same idea of placing a bookmark in a physical publication--you're simply marking something you found important, enjoyed, or where you left off to continue reading later. Social bookmarking is usually happening through websites using one of the various bookmarking services available, such as Delicious.

campaign
An online campaign is a set of coordinated marketing messages, delivered at intervals, with a specific goal, such as raising awareness for a cause or candidate or increasing sales of a product.

Circle
Circles are clusters of a user's friends on Google+, meaning you can group certain people you choose to connect with on your Google+ into a certain Circle, such as colleagues, college connections, family, etc. When you want to share content with only these individuals, you include that specific Circle in your post's sharing options. Capitalize Circle when referencing Google+'s Circle feature.

cloud computing
Cloud computing (also called "the cloud") refers to the growing phenomenon of users who can access their data from anywhere rather than being tied to a particular machine.

Creative Commons
Creative Commons generally refers to a not-for-profit licensing system that offers creators the ability to fine-tune their copyright, spelling out the ways in which others may use their works.

Digg
Digg is a popular social news site that lets people discover and share content from anywhere on the web. Users submit links and stories and the community votes them up or down and comments on them. Users can "Digg" stories they like or "bury" others they don't.

embed/embedding
The act of adding code to a website so that a video or photo can be displayed while it's being hosed at another site. Many users now watch embedded YouTube videos or see Flickr photos on blogs rather than on the original site.

Facebook
To place content onto Facebook is to "post." Don't use Facebooking as a verb.

Facebook Live
Facebook Live offers live-streaming video capabilities with the option for real-time follower interaction. Followers get a notification when your page goes Live. As they watch, they can respond with emotion emojis as well as ask questions in the comments section. Facebook Live videos stay on your page indefinitely.

fair use
Fair use is a doctrine in U.S. law that permits limited use of copyrighted material without obtaining the permission of the copyright holder, such as use for scholarship or review. Fair use is delineated in Section 107 of the U.S. Copyright Code.

feed
A web feed or RSS feed is a format that provides users with frequently updated content. Content distributors syndicate a web feed, enabling users to subscribe to a site's latest content. By using a news reader to subscribe to a feed, you can read the latest posts or watch the newest videos on your computer or portable device on your own schedule. Alternately, a feed may refer to a timeline or newsfeed. See timeline.

flash mob
A flash mob is a group of individuals who gather and disperse with little notice for a specific purpose through text messages, social media or viral emails. It's now generally considered a somewhat dated term.

Flickr

Follow Friday
Follow Friday is a Twitter meme via the hashtag #ff every Friday on Twitter. Users select other usernames and tweet them with #ff in their post, meaning they recommend following those Twitter users.

friends
Specifically, Facebook friends. These are individuals you consider to be friendly enough with you to see your Facebook profile and engage with you.

geosocial
Geosocial refers to social networks that rely upon user-submitted location data or geolocation techniques (such as GPS) that allow users to connect and coordinate with other local people or events that match their interests.

geotagging
Geotagging is the process of adding location-based metadata to media such as photos, video or online maps.

Google+
Google+ is Google's social network. Similar to Facebook, it offers users features such as circles and hangouts. Note that there is no space between Google and the + symbol.

Government 2.0
Government 2.0 is the term for attempts to apply the social networking and integration advantages of Web 2.0 to the practice of government. Shortened to Gov2.0 at times.

Hangout
A Hangout is a video service on Google+ that allows you to video chat with up to 10 Google+ users or groups at a time.

Hangout on Air
A Google+ Hangout that is streamed live via YouTube.

hashtag
A hashtag is a community-driven convention for adding additional context and metadata to your tweets. Hashtags are added in-line to your posts by prefixing a word with a hash symbol (or number sign). Twitter users often use a hashtag to aggregate, organize and discover relevant posts.

Instagram/Instagram Live/Instagram Story
Instagram is a photo sharing application that lets users take photos, apply filters to their images, and share the photos instantly on the Instagram network and other social networks like Facebook, Flickr, Twitter, and Foursquare.

iOS
Refers to Apple device software popular on the iPhone and iPad. Used generically to parallel Android devices – e.g., available for Android and iOS mobile devices.

Like
A "Like" is an action that can be made by a Facebook user. Instead of writing a comment for a message or a status update, a Facebook user can click the "Like" button as a quick way to show approval and share the message. When referring to taking action, "Like" should be capitalized.

lurker
A lurker online is a person who reads discussions on a message board, newsgroup, social network, or other interactive system, but rarely or never participates in the discussion.

microblogging
microblogging is the act of broadcasting short messages to other subscribers of a web service.

MySpace

open source
In its strict sense, open source refers to software code that is free to build upon. But open source has taken on a broader meaning – such as open source journalism and open source politics – to refer to the practice of collaboration and free sharing of media and information to advance the public good. Well-known open-source projects include the Linux operating system, the Apache web server and the Firefox browser.

Periscope

permalink
A permalink is the direct link to a specific blog entry that is intended to be permanent and unchanging.

Pinterest/pin board

platform
Platform is the framework or system that runs software and presents content. WordPress, for example, is a service that serves as a platform for a community of blogs. In a larger context, the Internet is becoming a platform for applications and capabilities, using cloud computing.

podcast
A podcast is a digital file (usually audio but sometimes video) made available for download to a portable device or personal computer for later playback. A podcast also refers to the show that comprises several episodes. A podcast uses a feed that lets you subscribe to it so that when a new audio clip is published online, it arrives on your digital doorstep right away.

public domain
A work enters the public domain when it is donated by its creator or when its copyright expires. A work in the public domain can be freely used in any way, including commercial uses.

QR code
Stands for quick response code – it is a barcode that a mobile device can scan to quickly hyperlink a user to an online product or website. A QR reader is employed to scan the barcode.

RSS
Really Simple Syndication, sometimes called web feeds, is a web standard for the delivery of content (e.g., blog entries, news stories, headlines, images, video) enabling readers to stay current with favorite publications or producers without having to browse from site to site.

Screencast
A screencast is a video that captures what takes place on a computer screen, usually accompanied by audio narration. A screencast is often created to explain how a website or piece of software works, but it can be any piece of explanatory video that strings together images or visual elements.

selfie
Used to describe a type of self-portrait image, typically taken with a hand-held digital camera or camera phone.

short code
A short code is a mobile shortcut – a telephone number consisting of four to six digits that makes it easier for subscribers to vote, subscribe to a service, order ringtones and the like via SMS (e.g., text HAITI to 90999 in order to contribute to the Red Cross's relief efforts).

smart phone
A smart phone is a handheld device capable of advanced tasks beyond those of a standard mobile phone. Capabilities might include email, chat, taking photos or video or hundreds of other tasks.

SMS
SMS stands for Short Message Service, a system that allows the exchange of short text-based messages between mobile devices. Use text message or text when possible.

Snapchat/Snapchat Story
Allows users to string together multiple videos and images to tell a story to followers. Preferred in the vertical format. Clips are typically 10 seconds in length and stay live for 24 hours before they disappear.

social/Social
Can be used as an adverb for an event taking place on a social media platform, but also be an in-person event for NASA's social media followers (used as a reference to a proper name, use "Social"). Used in the plural, it can refer to attendees of a NASA Social ("socials," or "socialites").

social bookmarking
Social bookmarking is a method by which users locate, store, organize, share and manage bookmarks of web pages without being tied to a particular machine. Users store lists of personally interesting Internet resources and usually make these lists publicly accessible. Delicious is the best-known social bookmark site.

socializing
The act of publishing content to social media. ("Post" on Facebook, "Tweet" on Twitter, and "Publish" on blogs, etc.)

social media
Social media are works of user-created video, audio, text or multimedia that are published and shared in a social environment, such as a blog, podcast, forum, wiki or video hosting site. More broadly, social media refers to any online technology that lets people publish, converse and share content online.

social media optimization
Social Media Optimization (SMO) is a set of practices for generating publicity through social media, online communities and social networks. The focus is on driving traffic from sources other than search engines, though improved search ranking is also a benefit of successful SMO.

social networking
Social networking is the act of socializing in an online community. A typical social network allows you to create a profile, add friends, communicate with other members and add your own media.

social news
Social news sites encourage users to submit and vote on news stories or other links, thus determining which links are showcased. Social news was pioneered by community sites like Slashdot, but has become more popular with the advent of Digg and similar sites such as Reddit, Newsvine and NewsTrust.

story
Only meant to refer to vertical video and still content shot using mobile devices for sharing for a 24-hour period before it becomes inaccessible to users. Can refer to both a Snapchat story and an Instagram story.

tag cloud
A tag cloud is a visual representation of the popularity of the tags or descriptions that people are using on a blog or website. Popular tags are often shown in a large type and less popular tags in smaller type.

tags
Tags are keywords added to a blog post, photo or video to help users find related topics or media, either through browsing on the site or as a term to make your entry more relevant to search engines.

terms of service
Terms of service (TOS) are the legal basis upon which you agree to use a website, video hosting site or other place for creating or sharing content. Check before agreeing to concede the rights the site owners may claim over your content.

Timeline
Timeline is the new Facebook format for personal profiles. It is essentially a digital scrapbook of a user's life, displaying their profile in an actual timeline format so they can see at exactly what point in time something a story occurred. Capitalize Timeline when referring to the Facebook feature.

trend
A trend is seen on every social network. Facebook shows what is trending when multiple users are sharing the same link or discussing the same topic. Google+ highlights trending topic when a user conducts a search. Twitter has a section to the bottom right of its home feed which clearly shows what topics and hashtags are trending in tweets. And LinkedIn shows what industries (in LinkedIn Today) that a certain story is popular.

troll
In internet slang, a troll is someone who posts controversial, inflammatory, irrelevant or off-topic messages in an online community, such as an online discussion forum or chat room, with the primary intent of provoking other users into an emotional response or to generally disrupt normal on-topic discussion.

Tumblr

Tweep
A casual reference for a Twitter user. (A portmanteau of Twitter and peep.)

tweet
A post on Twitter, a real-time social messaging system. To publish content on Twitter, use "tweet" as a verb.

TweetChat
A TweetChat is a chat or discussion that is held on Twitter and is open to all users. Questions are prompted from the user hosting the chat, while anyone else can respond using a particular hashtag. The hashtag is the marker for someone participating in the chat.

Tweetup
An organized or impromptu gathering of people who use Twitter. Users often include a hashtag, such as #NASAtweetup, when publicizing a local tweetup. Preferred term is NASA Social.

Twitterverse
Akin to blogs and the blogosphere, the Twitterverse is simply the universe of people who use Twitter and the conversations taking place within that sphere.

URL
Stands for Universal Resource Locator. Avoid use. Use web address or website.

user-generated content
Often abbreviated UGC, user-generated content is an industry term that refers to all forms of user-created materials such as blog posts, reviews, podcasts, videos, comments and more.

unconference
An unconference is collaborative learning event organized and created for its participants by its participants. BarCamp is an example of a well-known unconference.

Videoblog
A videoblog, or vlog, is simply a blog that contains video entries. Some people call it video podcasting, vodcasting or vlogging.

virtual world
A virtual world is an online computer-simulated space, such as Second Life, which mimics aspects of real life with fantasy elements. Typically, you can create a representation of yourself (an avatar) and socialize with other residents for free, though you can also buy currency (using real money) to purchase land and trade with other residents. Second Life is being used by some nonprofits and businesses to run discussions, virtual events and fundraising.

Web 2.0
Web 2.0 refers to the second generation of the web, which enables people with no specialized technical knowledge to create their own websites to self-publish, create and upload audio and video files, share photos and information and complete a variety of other tasks. In this new world, the internet becomes a platform for self-expression, education and advocacy that "regular people" can use on their own without having to go to an expert to do it for them in contrast to the less interactive publishing sites of Web 1.0. Some of the best-known Web 2.0 websites include Wikipedia, MySpace, Digg, Flickr and YouTube.

webcast
A webcast refers to a live or delayed audio or video broadcast. Webcasting refers to the ability to use the web to deliver live or delayed versions of audio or video broadcasts. Webcasts may be "interactive" (for example, users may rewind the show) whereas

traditional broadcasting generally is not. Listeners may receive textual or visual data (artist and song titles, ads, album artwork, etc.) during a webcast.

webinar

Short for web-based seminar, a webinar is a presentation, lecture, workshop or seminar that is transmitted over the web. In general, participants register in advance and access the presentation in real time over the Internet and listen to the presenter either through computer speakers or a telephone connection. Webinars are generally one-way and can involve chat or polls. There are a large number of companies that offer webinar services.

widget

A widget is an element of a graphical user interface that displays an information arrangement changeable by the user, such as a window or text box.

wifi

wifi stands for wireless fidelity, a simple system allowing enabled devices to connect to the Internet within short range of any access point without cables or adaptors.

WordPress

Commercial Partner Media Usage Rights

When NASA uses an image on Flickr that was provided by a commercial partner (Boeing, SpaceX, et al), certain language must accompany the image. Each company has different requirements, as listed below.

SpaceX
Copyright: Here is our public domain dedication.
https://creativecommons.org/publicdomain/zero/1.0/
Rights Usage Terms: To the extent possible under law, www.spacex.com has waived all copyright and related or neighboring rights to this work. This work is published from the United States.

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